

THE MONTHLY CHRONICLE.

FEBRUARY, 1841.

ARTICLE II.

THE GOVERNMENTS OF EUROPE, CHAP. II.

II. *The Eight Powers of the Second Class.*

SWEDEN AND NORWAY.

The Kingdoms of Sweden and Norway are united under one sovereign, but have distinct administrations, and each kingdom has its own assembly of estates. The present sovereign is King Charles John. His family name was Bernadotte, and he received from the emperor Napoleon the title of Prince of Ponte Corvo, &c. He was born at Pau, in France, Jan. 26, 1764, was distinguished as a general in the service of France in the wars of the French Revolution, and was chosen by the Diet of Sweden, and adopted by the late King Charles XIII., Aug. 21, 1810, as his son and successor, and succeeded to the crown, Feb. 5, 1818; was crowned king of Sweden May 11, and king of Norway, Sept. 7, 1818. He was married Aug. 16, 1798, to Eugenia Bernardina Desiree, sister of the wife of Joseph Bonaparte. They have one son, viz.:

Joseph Francis *Oscar*, Prince Royal, Duke of Sudermania, who was born July 4, 1799, was married June 19, 1823, to Josephine Maximilian Eugenia, daughter of Duke Eugene of Leuchtenberg, who was born March 14, 1807. They have five children, of whom four are sons.

The *Council of State* is composed of ten ministers, seven of whom are with a portfolio of a department. The present Minister of the Interior is Olof Immanuel *Fuhræus*; of the Finances, John *af Wingard*; of the Marine, Baron John *Lagerbjelke*; of War, Baron Gustavus Bror *Cederstram*; of Worship, Albrecht Elof *Ihre*; of Foreign Affairs, ———.

Chancellor of Justice, Arvid *Faxe*; Attorney General of Justice of the Kingdom, Charles Louis *Landin*.

Presidents of the Superior Courts of Justice at Stockholm, Eric Gab. *de Rosen*; at Jonkoeping, Laur Her. *Gyllenhaul*; at Christianstadt, Baron Gaspard *Ehrenborgh*.

Grand Admiral of Sweden and Norway, the *Prince Royal*.

Governor General at Stockholm, Maj. Gen. *Azel Møllerhjelm*. The kingdom is divided into 24 provinces, in each of which is a civil government. There are six

military districts, over each of which is a military commander, with the rank of Lieut. Gen. or Maj. Gen., one of whom is the Prince Royal.

There is an Archbishop of Upsal, and eleven Bishops.

The Council of State of Norway is composed of the Governor General of the Kingdom; three Ministers of State, who reside at Stockholm, and six who reside at Christiana.

Gov. General of the Kingdom, Count John G. H. de *Wedel Jarlsberg*; Secretary of State in Chief of the Cabinet, *Frederic Due*; Adj. General for the Army, Maj. Gen. John Henry *Spoerck*; Adj. Gen. for the Marine, Rear Admiral J. N. *Muller*.

Area and Population in 1833.

	Square Miles.	Inhabitants.	Inh. per sq. mile.
Sweden,	169,700	2,956,900	17
Norway,	121,724	1,150,000	9
Total,	291,424	4,106,900	14

The population of Sweden in 1835 was 3,025,140.

The three provinces of Oestersunds, Umea, and Pitea, extend over near half the territory of the kingdom of Sweden, and have together a population not exceeding 140,000. The two northern Bailliages of Norway, extend over more than a third of the kingdom, and possess a population of but about 90,000. With the exception of these almost uninhabited regions, the residue of the two kingdoms has an average population of about 24 to a square mile. The king in an address to a deputation who met him at Christiana, Dec. 21, 1838, said that in a period of 25 years, under his administration, the population of Norway had doubled.

The annual revenue of Sweden is about 13,000,000 thalers banco, or 4,850,000 dollars, and the expenditures are about equal to the revenue. More than half the expenditure is appropriated to the support of the army and navy. The army numbers 39,846 men, of whom 8,000 are cavalry, and 4,340 artillery. The navy contains 21 ships of the line and 8 frigates, besides smaller vessels.

The annual revenue of Norway is about 2,100,000 thalers, the whole of which is absorbed in the expenditures. The army contains 12,000 men.

DENMARK.

King Christian VIII., was born Sept. 18, 1786, and succeeded Frederic VI., Dec. 3, 1839. He was crowned June 28, 1840. He was married June 11, 1806, to a Princess of Mecklenberg Schwerin, separated from her in 1812, and again married in 1815, to a Princess of Holstein. He has one son, viz. :

Frederic Charles Christian, Prince Royal, born Oct. 6, 1808, who is Lieut. Gen. and Commandant General in North Jutland. He married a princess of Denmark, Nov. 1, 1828, and was separated from her in 1837, having no children.

The King has a brother, Prince Frederic Ferdinand, born Nov. 22, 1792, and two sisters.

The Privy Council of State, under the presidency of the King, consists of Prince

Frederic Ferdinand; the Chancellor of the Royal Orders, *de Masting*; the President of the Chancelrie of Schleswig, Holstein, and Lauenburgh, *de Moltke*; the Minister of Justice, Paul Christian *de Stemann*; the Ministers of the Finances, Count Adam, William *de Moltke*; and of the Chief of the department of Foreign Affairs, John *de Krabbe Carisius*.

Director of the Chamber of the Finances, *Schænheyder*; of Commerce and the Customs, *Louczow*; of the Posts, *Monrad*; Justiciary of the Supreme Tribunal at Copenhagen, *de Bornemann*.

Adj. Gen. of the State, and of the Marine, *Wulff*.

Gov. Gen. of the West Indies, Maj. Gen. *de Scholten*.

Gov. Gen. in the East Indies, Col. *Rehling*.

Extent of Territory and Population, in 1834.

	Square Miles.	Inhabitants.
Denmark,	14,598	1,223,807
Schleswig, Holstein, and Lau-		
enburg,	7,165	809,468
Faroe Isl.,	496	6,928
Iceland,	29,800	56,034
Total,	52,059	2,096,237
<i>Colonies.</i>		
Greenland,	3,943	4,670
West Indies,	178	46,290
Tranquebar and Guinea,	552	28,000
		78,960

The revenues of the state amount to about 14,000,000 thalers banco, or 6,225,000 dollars.

Public debt,	Foreign,	55,220,000 thalers.
	Domestic,	69,601,030 "

124,821,030

The foreign debt consists of 11,420,000 thalers in Holland, Belgium, &c., at 4 per cent., and the residue in England at 3 per cent. The Danish thaler banco, or crown, is equal to about 44½ cents.

The army consists of 32,780 men. The navy of 7 ships of the line, 7 frigates, and several smaller vessels. The number of officers is 152.

NETHERLANDS.

William II., King of the Netherlands, Prince of Orange Nassau, and Grand Duke of Luxemburg, was born Dec. 6, 1792, and succeeded his father, William I., on his abdication, Oct. 7, 1840. William I., who is still living, was born Aug. 24, 1772; he assumed the reins of government of the Netherlands, under the title of Sovereign Prince, Dec. 6, 1813, took the oath of fidelity as Sovereign Prince, March 30, 1814, and as King of the Netherlands, Sept. 21, 1815. He married a daughter of Frederic William II. of Prussia, who died Oct. 12, 1837. William II. married Feb. 21, 1816, Anne Pau-

lowna, daughter of the late emperor Paul of Russia, who was born Jan. 18, 1795. They have four children, viz :

1, *William Alexander Paul Frederic Louis*, Prince Royal, and Major General, who was born Feb. 19, 1817, and married June 18, 1839, to *Sophia Frederica Matilda*, daughter of the King of Wurtemberg, and has one son, born Sept. 4, 1840. 2, *William Alexander Frederic Constantine Nicholas Michael*, Maj. Gen., born Aug. 2, 1818. 3, *William Frederic Henry*, Captain in the Navy, born June 13, 1820; and 4, *Wilhelmine Maria Sophia Louisa*, born April 8, 1824.

The present king has a brother, *William Frederic Charles*, Admiral of the Fleet, General and Grand Master of Artillery, who is married to a daughter of Frederic William III. of Prussia, and has a daughter and a son; and a sister, who is married to a brother of the present King of Prussia.

The government is a limited monarchy, the principles of which are defined by a written constitution. There is a legislative assembly, called *the States General*, consisting of two Chambers. The first Chamber consists of members appointed by the King, for life. The second Chamber consists of Deputies who are chosen by the states, or assemblies of the provinces, for terms of three years. Each Province has its assembly of *States*, which meet periodically, for the transaction of business of local concern. The King is the source of all power, except that which is strictly legislative, and by him all appointments to office are made. For advising in matters of government, there are two Councils, viz., the *Council of Ministers*, consisting of a large number of Ministers of State, including the Ministers with portfolios of departments, and other Ministers of State, to the number in all of more than twenty; and the *Council of State*, consisting of the principal male members of the Royal family, and fourteen ordinary and extraordinary counsellors.

The other principal officers of government are the Governors of Provinces, the Grand Officers of the Household of the King, and the Governors of the Colonies. The Gov. General of the East Indies is Lieut. Gen. *d'Eerens*. Gov. of Possessions on the coast of Guinea, Lieut. Col. *A. Van der Eb*. Gov. of the West Indies, Rear Ad. *J. C. Ryk*.

Extent and Population of the Possessions of the Netherlands.

	Square Miles.	Inhab. in 1839.	Per Sq. Mile.
Ten Provinces,	11,314	2,615,029	231
Limburg,	850	185,000	217
Luxemburg,	988	160,000	162
Total,	13,152	2,960,029	225
<i>Colonies.</i>			
Batavia,	49,904	4,800,700	96
Sumatra,	18,549	1,040,000	56
Other E. I. Islands,	8,967	704,000	78
Africa,	2,777	15,000	
Surinam,	10,409	57,040	
St. Eustaria,	191	13,710	
Curacoa,	127	12,350	
	90,924	6,642,800	

Of the population of the ten provinces of the Netherlands, 1,698,342 are Protestants, 910,082 are Catholics, and 51,127 Jews.

BELGIUM.

Leopold I. George Christian Frederic, King of Belgium, Prince of Saxe Coburg Gotha, was born Dec. 16, 1790; married the Princess Charlotte, daughter of George IV. of England, who died Nov. 6, 1817; was elected King of the Belgians, by the national congress, June 4, 1831; took the constitutional oath, July 21 of the same year, and married Aug. 9, 1832, *Louisa Maria Theresa Charlotte Isabella*, daughter of the King of the French, who was born at Palermo, April 3, 1812. They have three children, viz.:

1, *Leopold*, Prince Royal, Duke of Brabant, born April 9, 1835; 2, *Philip*, Count of Flanders, born March 24, 1837; and 3, *Maria Charlotte Amelia*, born June 7, 1840.

King Leopold is the youngest brother of the present reigning Duke of Saxe Coburg Gotha, and of the Duchess of Kent, mother of Queen Victoria of England. He is consequently the uncle of Queen Victoria, and of her husband Prince Albert.

Council of Ministers, *Joseph Lebeau*, Minister of Foreign Affairs; *Matthew Nicholas Joseph Leclercq*, of Justice; *Charles Liedts*, of the Interior; *Charles Rogier*, of Public Works; *Gen. Buzen*, of War; *Edward Joseph Mercier*, of the Finances.

Ministers of State, Count *Felix de Merode*, Count *de Muelenaere*, Count *de Theux de Meylandt*, Count *Goblet d'Alviella*, *Auguste Duvivier*.

The Kingdom of Belgium is divided into nine Provinces, including the portions of Limburg and Luxemburg, which remain to it. The area measures 11,335 miles, and it contained a population in 1839, of 3,972,943. This gives an average of 350 persons to each English square mile, which is a denser population than is to be found in any country of equal extent in Europe. Nearly the whole population are of the Roman Catholic faith, there being but 22,000 of other creeds, of whom 1,873 are Jews.

The revenue for the year 1839, arising from direct taxes, customs, excise, and stamps, amounted to 76,759,069 francs. The budget of expenses for 1840 amounted to 95,000,000 francs.

The Belgian army, according to the report of the Minister of War, Nov. 5, 1840 consisted of Infantry, 57,670 men.

Cavalry,	8,503	"
Artillery,	8,970	"
Engineers,	1,518	"
Gens d'Armes,	1,268	"

Total,	77,929	"
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SPAIN.

The present Sovereign of Spain is Queen Maria *Isabella* II. Louisa. She was born Oct. 10, 1830, and succeeded her father, King Ferdinand VII., Sept. 29, 1833. The government was administered until September last by her mother, Maria Christina, Queen Regent, daughter of the late King Francis I., of the Two Sicilies, who was born April 27, 1806, and married Dec. 11, 1829, to Ferdinand VII., by whose will she was appointed Regent of Spain during the minority of Isabella II. The other principal members of the royal family are :—

1. The Infanta Maria Louisa Ferdinanda, born Jan. 30, 1832, sister of the Queen.
2. Charles Maria Isidore, commonly known by the name of *Don Carlos*, brother of Ferdinand VII., born March 29, 1788. He is a second time married, and has three sons, the eldest of whom, Charles Louis Maria, was born Jan. 31, 1818. On the death of his brother Ferdinand VII., he claimed the right to the throne, by virtue of the ancient laws of the kingdom, and was acknowledged as the lawful sovereign of the kingdom in some of the provinces, until he was expelled from the country after a long protracted and sanguinary civil war.
3. The widow of Francis I., late king of Sicily.
4. The Infant Francis de Paul Anthony, brother of Ferdinand VII., who has three sons and five daughters.

The government is administered at present by a *Provisional Regency*, of which the Duke of Victoria [Gen. Espartero,] is President.

Spain is divided into 14 ancient Provinces, several of which are usually denominated kingdoms, and recently into 47 smaller provinces, besides the Balearic and Canary Islands. The extent of the Kingdom is 182,280 square miles. The population in 1833, was 12,286,941.

Colonies.

In the West Indies,	Population.
The Island of Cuba,	730,262
“ “ Porto Rico,	288,000
The Virgin Islands,	2,600
In the East Indies—the Philippines and other islands,	2,679,500
Possessions in Africa,	17,071
Total,	3,717,433

The revenues of 1839 were estimated at 715,096,838 reals. The expenditures, including 305,568,288 reals for interest of the public debt, 1,650,301,974 reals. The entire debt, bearing 4 and 5 per cent. interest, 5,419,748,583 reals, or £57,584,823 sterling. The debt not bearing interest, 12,429,833,321 reals.

PORTUGAL.

Queen Donna *Maria* II. da Gloria, daughter of Don Pedro I., late emperor of Brazil, was born April 4, 1819. She was declared Queen of Portugal, on the abdication of her father, May 2, 1826, and under his direction and government, she entered Lisbon, Sept. 23, 1833. She married Dec. 1, 1834, by procuration, and Jan. 26, 1835, in person, Duke Augustus of Leuchtenberg, who died on the 28th of March following. She was again married, Jan. 1, 1836, by procuration, and April 9 in person, to Ferdinand Augustus Francis Anthony, Duke of Saxe Coburg Gotha, who was born Oct. 29, 1816, a nephew of the reigning Prince of Saxe Coburg, and cousin of Queen Victoria of Great Britain, and of Prince Albert her husband. They have three children :

1, Don Pedro of Alcantara, Prince Royal, born Sept. 16, 1837 ; 2, Louis Philip, Duke of Oporto, born Oct. 31, 1838.

The Queen of Portugal has a brother, viz., the Emperor Don Pedro II., Emperor of Brazil, and three sisters, princesses of Brazil.

Her other near relations are Don Miguel, the brother of her father, who for many years claimed the right to the throne of Portugal, but was compelled to abandon the country June 1, 1834 ; and three sisters of her father, *Maria Theresa*, Princess of Beira ; *Isabella Maria*, late Regent of Portugal ; and *Anne*, wife of the Marquis of Loulé.

The Ministry consists of the Count of *Bomfin*, President, and Minister of War ; Viscount *de Carreira*, Minister of Foreign Affairs ; *Rodrigo da Fonseca Magalhaens*, Minister of the Interior ; *Antonio da Costa Cobral*, Minister of Justice and of Worship ; and *Pereira Ferraz*, Minister of the Finances.

Among the Grand officers of the court are the Marquis of Sampaio, Grand Master ; the Duchess of Ficalho, Grand Mistress ; the Marshal Duke of Terceira, Grand Equerry ; Grand Master of the Ceremonies, the Count de Suberra ; Captain of the Guards, the Duke of Palmella.

Possessions of Portugal, their Extent and Population.

<i>On the Continent.</i>	Square Miles.	Population.
Seven Provinces,	36,509	3,549,420
<i>Islands in the Atlantic.</i>		
The Azores, Madeira and Cape de Verds,	4,755	391,500
<i>Possessions in Asia.</i>		
Goa, Dilli in Timor, and Macao,	6,624	576,000
<i>Possessions in Africa.</i>		
Coast of Guinea, Angola and Mozambique,	599,302	682,000
Total,	647,190	5,198,420
The Army consists of 21,500 Infantry, 3,680 Cavalry, 2,232 Artillery.		
Total,	27,472	

The Marine consists of 2 ships of the line, 4 frigates, and 6 brigs.

SARDINIA.

Charles Albert Amedeus, King of Sardinia, was born Oct. 2, 1798; succeeded his father Aug. 16, 1800, in the line of Savoy Carignan, and Charles Felix Joseph in the Kingdom of Sardinia, April 27, 1801. He married the Grand Duchess Maria Theresa, daughter of Ferdinand, Grand Duke of Tuscany, Sept. 30, 1817, and has two sons, viz.:

1. *Victor Emanuel*, Duke of Savoy, born March 14, 1820.

2. *Ferdinand*, Duke of Genoa, born Nov. 15, 1822.

There are many relatives of King Charles Albert, who are connected by various degrees of consanguinity with most of the reigning families of Italy.

The superior authorities of Sardinia are the *Council of Ministers*; the *Council of State*; the Military Governors of Divisions; and the Royal Superior Council for the Affairs of Sardinia.

Minister of Foreign Affairs, Count Solaro *della Margarita*; of the Interior, Count Beraudo *de Pralormo*; of Finances, Count *Gallina*; of War and the Marine, and of the Affairs of Sardinia, Chevalier *Pes de Villamarina*, Lieut. General; Keeper of the Seals, President—Minister of State of Ecclesiastical Affairs, and of Grace and Justice, Count *Barbaroux*; Viceroy—Lieut. and Capt. General of Sardinia, Chevalier Joseph Montiglio *de Villanuova*; Regent of the Royal Chancery, Count *Piccone*.

Extent of Territory and Population.

	Square Miles.	Inhabitants.
Provinces on the Continent,	19,860	4,125,750
The Island of Sardinia,	9,243	524,600
Total,	29,003	4,650,350

The annual revenues and expenditures of the State are about 79,000,000 francs. The public debt amounts to 145,000,000 francs.

The army in time of peace numbers 25,000 men. The marine 26 vessels of all descriptions.

THE TWO SICILIES.

Ferdinand II., King of the Two Sicilies, or of Naples and Sicily, was born Jan. 12, 1810; succeeded his father, Francis I., Nov. 8, 1830; married 1, a daughter of the late king of Sardinia, and 2, Jan. 9, 1837, Maria Theresa Isabella, daughter of the Archduke Charles of Austria. He has three children, viz.:

1, By the first marriage, *Francis d'Asis Maria Leopold*, hereditary Prince, Duke of Calabria, born Jan. 16, 1836. 2, *Charles Louis*, Count of Trani, born Aug. 1, 1838. 3, *Albert Maria Francis*, Count of Castrogiovanni, born Sept. 17, 1839.

King Ferdinand has twelve brothers and sisters now living, among whom are

Louisa the Duchess dowager of Berry, of France; *Christina*, the Queen dowager, and late Queen Regent of Spain; *Antoinette*, Grand Duchess of Tuscany; and Charles Ferdinand, Prince of Capua, who married Miss Penelope Smith, an English lady.

There is in the government of the Sicilies, a *Council of State*, and a *Council of Ministers*. The Ministers are members of the Council of State, of which there are also members without a portfolio.

The President of the Council of State, Marquis Joseph *Ceva Grimaldi*.

Minister Secretary of State for Foreign Affairs, Prince D. Fulco *Ruffo di Calabria*.

Minister of the Finances, ad interim, and of Ecclesiastical Affairs, *Giovanni d'Andrea*.

Of Grace and Justice, Nicola *Parisio*; of General Police, Francesco Saverio *Delcarretto*; of the Interior, Nicola *Santangelo*; Director of the Ministry of War, Joseph di *Brocchetti*.

Lieut. Gen. in Sicily, *de Tchudy*.

Extent of Territory and Population.

	Square Miles.	Inhabitants.
Kingdom of Naples,	31,408	6,032,484
Kingdom of Sicily,	10,509	1,943,366
Total,	41,917	7,975,850

In 1834, there were computed to be 27,144 Priests, 11,680 Monks, and 9,775 nuns. The annual revenues and expenditures of the State are about 26,000,000 ducats.

The army consists of	29,381 Infantry,
	4,473 Cavalry,
	2,100 Artillery,
	750 Engineers.
	36,704

TURKEY.

Abdul *Medjid* Khan, the Grand Sultan of the Ottoman Empire, was born April 19, 1823. He succeeded his father Mahmoud II., July 1, 1839.

The present Sultan has two daughters, the eldest, *Mehwibe* Sultana, was born May 31, 1840. He has a brother *Abdul Azir*, born Feb. 9, 1830, and four sisters. The eldest daughter of the late Sultan, *Salyha* Sultana, was born June 16, 1811, and was married June 1834, to Halil Rifat Pasha, one of the high officers of the government. Two other of the Sultan's sisters are married to officers in the confidence of the government, and at present members of the Council of Ministers.

Grand Dignitaries of the Empire.

Grand Vizier, *Raouf* Pasha; Minister of Commerce, *Ahmet Fethi* Pasha, brother in law of the Sultan; Seraskier, or General in Chief of the troops of the line, *Mustapha Nourri*, Pasha; Capitan Pasha, or Grand Admiral, Mehmed *Said* Pasha, brother in law of the Sultan; Minister of Foreign Affairs, *Mustapha Reschid* Pasha; Minister of the Finances, and of the Treasure of the Sultan, Hadji *Saib* Pasha; First Minister and President of the Council, Mehmed *Hacib* Pasha; General in Chief of the Guard, and Military Governor of Scutari, Riza Pasha.

Corps Diplomatique resident at Constantinople. United States of America, *David*

Porter, Res. Min. Austria, Baron de *Sturmer*, Internuncio. France, Count Edward Pontois, Amb. Great Britain, Viscount *Ponsonby*, Amb. Prussia, Count *Koenigsmark*, Env. Ex. Russia, Priv. Couns. *Bouteneff*.

Territories and Population of the Empire.

	Square Miles.	Inhabitants.
Provinces in Europe,	208,120	10,000,000
The Island of Candia,	4,176	240,000
In Asia, Asia Minor,		480,000
Syria,		680,000
Armenia, Georgia, Curdistan, and Mesopotamia,		770,000
Medina and Mecca,		220,000
In Africa—Egypt—		1,760,000
Total,		14,150,000

The Grand Sultan claims also the sovereignty of Tripoli, Tunis, and Morocco, but his authority is at present but slightly recognised by the governors, and still less by the people of those countries.

ARTICLE III.

HARVARD UNIVERSITY.

The government of this institution having recently introduced a change of some importance, in the system of instruction, to which the public attention has been directed, we take this opportunity, for the purpose of giving a more clear view of the extent and object of that change, to present a brief account of the whole course of instruction in the University.

The organization of the government of the University is, we presume, well understood. Its four branches, the College, and the Law, Divinity, and Medical Schools, in themselves entirely distinct, are each under the direction of a Faculty, consisting of several of their professors, who are bound to perform this duty by the tenure of their offices. The President of the University presides over each of these Faculties. The immediate Government of the University is vested in a board denominated the Corporation, consisting of the President of the College, five Fellows, and the Treasurer. With this body rests, in fact, the power of the Government of the Institution. It is, however, responsible to the board of Overseers, which consists of the Governor, Lieut. Governor, Council and Senate of the State, with the Speaker of the House of Representatives, together with thirty members who are elected by the body itself, of

whom fifteen are required to be clergymen of Congregational churches in and near Boston, and fifteen laymen. This board has a veto on all appointments and other measures of the Corporation. The Corporation appoints its own members, subject only to the negative of the Overseers.

The course of study pursued in the academical branch of the University, that is, in *Harvard College*, properly speaking, has materially changed since its foundation, two hundred years ago. It was then intended and considered by all its friends, rather as an instrument for educating men for the profession of theology than in any other light. They constantly spoke of it as "a school of the prophets," and kept its course of study framed with reference to such objects. A recollection of this original aim of the institution has perhaps been the cause of many of the unkind speeches occasionally made upon it as being behind the age, as being "a vessel moored in the current, to no advantage but to shew how fast the water runs by:" expressions which have been freely, perhaps unfairly, used with regard to the English Universities, and which have therefore naturally enough been transferred to this side of the water. In their application however, in this instance, they have been quite inappropriate. The College has in a very great measure thrown off the old bondage by which, as a theological institution, like all the other colleges of its day, it was once controlled.

To take a single instance: it would be difficult to name any more strictly practical branch of study than that laid down in the foundation of the late Count Rumford's professorship, which is devoted to the consideration of the application of the sciences to the useful arts; a professorship whose incumbents have made no small contributions to the general stock of knowledge in the branches to which, by the statutes of the foundation, their attention was called. Dr. Bigelow's well known treatise on Technology, consists of the substance of lectures which he delivered when he filled this chair; and the present professor, Mr. Treadwell, is well known, for the attention he has paid to the practical application of the sciences to the advancement of the useful arts.

This is however merely a branch of the general course of instruction in the physical sciences. In the study of these subjects, the text books prepared by Professor Farrar, chiefly from French originals, for the use of the University, and those more recently published by Professor Pierce, among others, are constantly used. It has frequently been suggested, that some of them are too abstruse to answer their purpose satisfactorily; on this account, we believe more than any other, their use is almost entirely confined to this Institution. The fault, if it be one, is on the right side. The Mathematical stud-

ies have always received considerable attention here, and at present, we fancy, no less than ever before. The close connection between them and most of the branches of physical science has been the cause to which a somewhat exclusively theoretical study of these sciences has perhaps been owing. The instruction is communicated by means of constant recitations with the professor, and experimental lectures by him. The course is thorough, comprehending Mechanics, Optics, Electricity and Magnetism, Acoustics, Astronomy, besides an elementary knowledge of Chemistry. Quite enough may be acquired in the progress of this course, for a firm basis to any farther studies, which the student may conduct himself in the subjects considered, or for the proper understanding of any information he may receive upon them, from whatever quarter. The study of this course is required of every undergraduate. Among the qualifications for a degree, it is, so far as we know, as extensive as that required in any other institution in the country, not excepting West Point.

In the branches of natural science, the instruction is communicated in the same way, by the study of text books and lectures; in these branches, however, with but one or two exceptions, the studies are entirely voluntary. That is, the student has his option, whether, under certain conditions, he will pursue the course or not; when he has once decided so to do, he is bound to pursue it under the directions of the government. This is all that is meant in any instance by a study's being *voluntary*, excepting with regard to one or two courses of lectures, which are attended by the students when they wish, without any compulsion.

The study of Civil History is conducted in the same way with that of Natural History.

The course of instruction in the modern Languages is so complete, that it deserves particular attention. Under the general direction of the Smith Professorship of the French and Spanish Languages, and of Belles Lettres, the chair of which is at present filled by Mr. Longfellow, instruction is given in French, German, Italian, Spanish, and Portuguese, by separate instructors, who generally speak as a vernacular the language which they teach. French is considered among the regular studies which every student is obliged to undertake; of the other languages, the student has his choice, it being only requisite that he shall always be engaged on one at least, while he may undertake the study of as many more as he pleases. No one is permitted to relinquish the study of a language until he has passed a satisfactory examination before a committee of the board of Overseers; such an examination requiring a knowledge of the language sufficient to enable the student to read it with tolerable ease and cor-

rectness, the course of study of one language varying from a year and a half to two years. Thus many of the students, when they graduate, are, in a manner, masters of three or four of the modern languages. In a manner, we say, for very few have any inclination to expend so much labor upon any one, as to give them the power to speak or write it correctly, nor is such a knowledge required by the government. Besides these languages, if sections are formed for instruction in any of the other modern languages, there are generally suitable means taken by the government to supply them with instruction without any extra expense to the student. The Oriental languages may be learned in this way; Hebrew is taught to all applicants, whether a section be formed or not. By a *section*, is meant a body of at least six persons, expressing a desire to pursue the extra course of study intended.

Besides the direct instruction in the languages thus conveyed, the professor of Modern Languages gives constantly, courses of lectures on subjects of interest connected with their study. The system leaving, as it does, considerable freedom of choice to the students as to the branch pursued, as they can all of them perceive the interest and importance of the objects of study, has always proved very efficacious; the study of these languages being undertaken with a good deal of zeal and corresponding effect. It has acquired in the University the name of the voluntary system, and its success led to the adoption of a similar system about three years since in the study of the Mathematics. At that time the arrangement of the purely Mathematical studies was materially changed. It had previously consisted of a complete course of Algebra, Geometry, Plane and Spherical Trigonometry, with several of their practical applications, and of the Calculus, Differential and Integral, with some of the most striking applications. By a very good arrangement, measures were taken to prevent any person going over this ground, without seeing his path clearly as he advanced. The student who proved deficient on any lesson was at once directed to take it again, and was not allowed to proceed, till he had, to appearance, at least, fully acquired it. The consequence of course was, that the different students in a class were in different places in the course, in proportion as their advancement had been more or less careful. The entire course was required of every individual. The practical difficulty in this arrangement was, that many persons would be found in every class, who, from the carelessness of their earlier education, were, or supposed themselves to be, unfit for the study of the higher mathematics. Such persons very soon found the whole course very disagreeable, and of course made only a compelled progress in it, of very little value to themselves or any one else. At the same time, all students

went over the same ground, whatever were their views of study or prospects in life, and this arrangement necessarily precluded the more extensive study of the pure mathematics, or of their application in the exact sciences. In view of these difficulties, the arrangement was changed, at the time we have mentioned; and it has since been conducted on a new basis, which has proved very successful. Every student who has completed the studies of Geometry, Algebra, Plane Trigonometry, with its application to Heights and Distances, to Navigation, and to Surveying, and that of Spherical Trigonometry, and has passed a satisfactory examination in each, may now discontinue the study of Mathematics at the written request of his parents or guardians, and in their place may take up the study of Civil History, Natural History, or Chemistry. These required Mathematical studies are usually completed in the Freshman year. If the student choose to continue the study of Mathematics, he may take his choice between a course of Practical Mathematics, including the more important branches of Surveying, Civil Engineering, and Navigation; one of pure Mathematics, including the more important branches; and one more extended than either, including besides those last mentioned, the higher branches of the pure Mathematics.

This system was found, as we have said, to succeed extremely well. While very few of the students gave up entirely the study of Mathematics, each one found his own tastes consulted, and was able to follow a course of study more consonant with his character and future profession than he could otherwise do. We may add that a voluntary task is always more cheerfully performed than one which is compulsory.

The success of the voluntary system in Mathematics led to the recommendation of a similar principle, for the regulation of the study of the Classics. By a recent vote of the board of Overseers (Feb. 18, 1841,) the resolutions of the Corporation providing for the adoption of such a system, have been confirmed. We presume, therefore, that they will go into immediate operation. They provide that any undergraduate who has completed satisfactorily the studies of the Freshman year in the dead languages, that is, who can read in Latin, Folsom's selections from Livy, and Cicero's tract "*De Claris Oratoribus*," and in Greek, Herodotus and Thucydides, having of course gone over the studies prescribed for admission, may have his election, whether he will pursue the study of the classics or not, under the same restrictions as we have mentioned as in force in the other departments, the books named making the whole of the required College course.

As to the prudence of this arrangement, we must be permitted to say a few words. We have only to object to its details; as we have

already suggested, any plan which leaves to a student at a certain point the option of the manner in which his future studies shall be arranged, is a good one. The only question is, where that point should be. We do not think that generally in the consideration of this question, with respect to the classics, the effect of the properly conducted study of the dead languages in the cultivation and development of the mind is nearly enough attended to. To some perhaps the declaration may seem a paradox; but we cannot hesitate to say, that the perfect acquisition of any language, besides the vernacular, is the most important agent in arousing and giving strength to the opening faculties of the mind. This is of course independent of any advantage which the knowledge of the language in itself may bring; as a mere intellectual exercise, the perfect attainment of any language is the highest available means in our hands for training the mind for systematic and regular action. We cannot believe that such a perfect attainment of the classical languages as this is obtained in a course of study which ends in Livy and Cicero's Brutus in the one language, and Herodotus and Thucydides in the other. The first two are the attainments of a second rate school boy, and the last two are by no means the ultimatum of Greek literature to be acquired by a well educated man. These views respecting the psychological value of the study of the languages, are by no means new; the officers of Harvard University ought to be among the last to doubt their weight.

Even if we look at the languages with reference merely to their use in the study of the ancient literatures, the standard placed is not high enough, certainly not in Greek. The amount of classical learning which enables a freshman to read Thucydides will in a very few years be entirely lost; and if it is intended that he shall preserve it by constant reading in the Greek language, he may as well devote himself to that reading under the care of a professor, as alone. We might add that the innovation proposes no collegiate acquaintance with Greek poetry, and relinquishes as an almost immediate consequence, any permanent accurate knowledge of Greek quantity.

The system, as we have said, has been introduced in the classical studies from a consideration of its success in the other branches where it has been previously applied. On the same consideration, ought the required standard to be fixed, or the cases at once cease to be parallel. In the department of Modern Languages, this standard is the knowledge of French, and the arrangement seems very proper, as French serves for a general language abroad, and affords, in a certain degree, the key to the pronunciation of the modern languages of the south of Europe. In the Mathematical department the standard is a knowledge of all the elementary branches of the Mathematics:

embracing so wide a field, that after it has been attained, any student may easily conduct the study of the mathematical sciences alone. But in the classics, the standard is arranged on a different principle. Its attainment does not involve directly any knowledge of the poetical literature of either of the dead languages; it gives no key to the peculiar opinions in philosophy, science, art and religion of the Greeks and Romans, or only such as is found in the study of a few books of history, and the comparatively unimportant tract of Cicero, *De Claris Oratoribus*.

We presume however, that it is intended that this standard shall be gradually raised. The College deserves much credit for the progressive improvements which have been made in its qualifications for admission, which are now as high as those of any American college, and higher than those of almost all. The improvements in education which we see all around us, will, it is to be hoped, result in putting it in the power of the College government to raise the standard of admission still higher than it is, and of course to raise proportionally the scale of collegiate studies. The time may yet come, when Greek and Latin shall be among the amusements of the American gentleman, when he shall turn an epigram as neatly in a classical as in his own language, and write Latin or Greek prose or poetry, as easily as English.

We ought perhaps, here to speak of the measures taken at Cambridge to inculcate a perfect knowledge of English, and its composition. Among the required studies are treatises on Rhetoric and Logic, accompanied by lectures from the Boylston professor of Rhetoric and Oratory. The students are also obliged constantly to write themes in their own language, which are subjected to a close and critical examination. The exercises of the various literary societies tend to the same end, and the forensical discussions required as a part of the course of study of philosophy and political economy are useful additions to the exercises in these branches.

The course of philosophy, moral and intellectual, pursued at the University, excites naturally enough, some curiosity. Men are so fond of arranging themselves into sects on these subjects, which, above all others, require the unfettered exertions of the powers of individual minds, that no inconsiderable interest has always been felt as to the particular mould by which the alumni of Harvard are formed. For several years, however, the use of a mould has been very prudently dispensed with. The instruction in these branches falls to the share of the Alford Professorship of Natural Religion, Moral Philosophy and Civil Polity, the only professorship, by the way, with one exception, where objects differing widely in their nature, are huddled together under the surveillance of one instructor. The

chair of this professorship had been for some years vacant, till the recent appointment of Dr. Walker. The gentlemen who performed the duties of the office, however, as well as the present able incumbent, have understood perfectly the great advantage which Americans have in the study of subjects which are investigated by the great minds of the other continent under the biases of sectarian and national prejudices. The philosophy which has been for many years inculcated at Cambridge, by Mr. Bowen, and more recently by Dr. Walker, is an American Eclecticism, if we may so speak, which seeks to criticise impartially the merits of all the European schools, without attempting to form any school or creed for itself. In intellectual philosophy, the dogmatism of any particular author, whose work has been used as a text book, has been carefully exposed and weighed against the views of other writers on the same subject. We find, for instance, in the list of text books, Locke's Essay, Abercrombie's Treatise, and Cousin's Psychology, and the explanations and comments of the lecturer go far to extend the list of philosophers whose theories are examined by the student.

The direct education in matters of theology is confined to the study of Paley's Evidences of Christianity, Butler's Analogy, and an annual course of lectures on the Critical History of the Scriptures. More than this perhaps would involve a sectarian bias, to be constantly avoided by an institution professing the most liberal principles possible in matters of Christian faith. We believe indeed, that the complaint is now almost extinct, that the University inculcates any sectarian doctrines, and that it has given way to another, of precisely the opposite character, but perhaps as virulently pressed, that it should and does not. As however it would be as impossible to suit the hundredth part of the community with respect to the doctrine to be inculcated, as it would be undesirable to inculcate any sectarian doctrine in an institution intended to be of universal utility, we cannot regret that nothing of the kind is attempted.

In this hurried manner, we have enumerated the method of instruction pursued in the most important of the various branches required to be understood by the candidate for a degree in the University. To such candidates, in practice, the advantages of the course of instruction are generally confined. But by its statutes any person is permitted to join in any course of study, by complying with the regulations of the government, although he does not intend to pursue all the branches, or to become a candidate for academical honors. The members of the three professional schools, and any other graduates who wish, may take advantage, in the same manner, of any of the courses of public lectures.

We have but little room left us to speak of the course of educa-

tion at the three professional schools. At the Theological school, as at each of the others, three years is the regular term of study; the whole of which must be spent by the student in Theological study. The theology inculcated here, is, it is well understood, an exposition of the views of Liberal Christians, whose modifications of course differ in their various shades, with the different temperament of individuals. The course of study comprises a study of the Hebrew and other Oriental Languages, a critical examination of the Scriptures of the Old and New Testaments, a careful examination into the doctrines, arguments, and results of Natural Religion, some instruction on Ecclesiastical History, and a diligent study of the various acquirements necessary to a clergyman in the active duties of his profession, such as a good delivery, ready extemporaneous speaking, and a polished style of writing. With the exception of some of the Oriental languages, a constant attention to all these branches is required of all the students.

There are those who doubt the utility of an institution of this kind in promoting the object which it has in view, the education of clergymen; who think that the minister of religion in this country requires so much for active usefulness besides theological lore, that he is better fitted for his profession in a situation where he may see more of life than he can in a theological school; who feel that the constant and undivided attention he there gives to questions of a theological and moral nature, may leave him with a *one-sidedness* which will render him less useful to his parishioners and to society than if his tastes and feelings were not so much circumscribed; who fear that in the constant attention to such subjects, many matters may be raised in his view to an undue importance, which will prevent his ever seeing them in their true light. With such persons, it will excite no wonder that the attendance at the Divinity School at Cambridge has been smaller than might at first sight have been supposed, from the numbers attached to the highly influential sect which it represents. They will consider the cause to be, not an inattention to religion or the proper communication of it, but a dislike to this peculiar agent for its communication.

The Law School, also established at Cambridge, suffers from no such impression. Under the direction of two professors, its classes pursue a thorough course of study in the various branches of the law, covering a wide field of inquiry. The course is arranged for three years, one half of which, however, entitles the student to the degree of Bachelor of Laws. Besides, the direct study of treatises on the different branches of legal inquiry, the frequent exercise of the students in a Moot Court, where one of the Professors presides, familiarizes them with the details of legal practice, and enables

them to apply the results of their studies sooner than they would have an opportunity of doing, were they obliged to wait until they were prepared to do it on the application of a bona fide client.

Of the Medical School, we need say but a word or two, as its operation and constitution are precisely similar to those of most institutions of the same nature in this country. The students receive private instructions from different physicians connected with the Mass. Medical Society, but are not permitted to receive the degree of Doctor of Medicine, until they have been present for two years at the course of public lectures provided by the government of the school; until they have studied three years, and have passed a satisfactory examination on the subjects connected with their profession.

Our intention, on presenting this brief sketch of the proceedings and system of instruction at the University, has rather been to call attention to its recent state and the improvements or alterations recently made, than to give a detailed account of its operations. The value of such institutions cannot be over estimated. Any establishment which receives every year a herd of raw, half informed, half instructed boys, to send them out after a certain period, well informed, well bred men, useful members of society, if not, indeed, its leaders, deserves the close attention of those who watch the various agents at work in the formation of our society. It is undoubtedly true, that the University, although it be the best endowed of any in the country, cannot compare in the extent of its resources, or instructions, with many institutions abroad. This is a difficulty which time and the generosity of its children must remedy; meanwhile we must remember that it is better adapted to the nature of our institutions than anything built on the model of a foreign school, college or university possibly could be, and that by the constant changes in its course of discipline, there is little room to fear that it will remain much behind the spirit of the time.

In decisions on all such changes, we must hope that a proper conservative spirit may have its due weight. It would be as strange as unfortunate if it were otherwise. Established and acting with the sole object of conveying to the rising generation the wisdom and experience of their predecessors, it would be strange if it should be found to succumb to every passing breath of present popular fancy. In a community so easily affected as ours by the glitter of anything new, it is a high and honorable duty, to keep constantly before the public eye the merits and advantages of that which has been tested by age. The colleges of our country, and foremost among them the University, must undertake this duty. They will add to their

storehouses of past learning whatever theories of the present day bear the closest scrutiny of science and philosophy, and will feel no scruple at rejecting boldly the masses of chaff with which they are surrounded.

MISCELLANY.

THE WINGS OF ICARUS,

Or, the Provincial in Paris.

(Continued from page 27.)

CHAP. XIV.

Blondel de Gustan carried the best part of his courage about him under the form of moustaches, whip, and spurs. On learning the sudden metamorphosis to which the weapons of the duel had been subjected, he changed countenance.

"Does Deslandes know what has passed?" said he to Barbeyrac, with emotion.

"He does not suspect it, and now that you are placed, I see no means to prevent it."

"In this case he will take aim without scruple, and perhaps will send a bullet through my head. *Sacre bleu!* this would be very disagreeable—what is to be done?"

"Do not fight, that is the safest."

"You are right, make haste with the reconciliation. That is your business."

Barbeyrac made some steps towards the substitute. Placing himself then in profile in a way to address the two adversaries, and stretching out a hand to each of them with a pathetic gesture:

"Come gentlemen," said he, "show yourselves reasonable. You have both given proof—it is sufficient to have come to the ground. Your dispute of yesterday is not of so serious a nature as to call for blood; forget then what has passed. I pray you, in the name of your ancient friendship, instead of fighting for a trifle, act like men wise as well as brave, and come and take each other's hands."

M. de Loiselay contemplated with a smile of pity, the pacific orator.

The substitute took the eloquence of Barbeyrac for a scene skilfully added to the comedy to exalt in the eyes of the old gentleman the

ferocious determination of the two adversaries. Confirmed in this idea by the look of intelligence which he received from Blondel, he prided himself on playing well his part, as an actor who in an unstudied proverb, seeks effective answers.

"Gentlemen," said he, raising his head proudly, "on the ground, all discussion appears to me useless and out of place. Now we have arms in our hands, it is not to keep up a dialogue, but to fire."

"Bravo, bravo," said M. de Loiselay, in a low voice; "St. George could not have spoken better."

"But," replied Barbeyrac, "consider—"

"I consider but one thing," said Deslandes, with a still more heroic tone, "the wine is drawn, let us drink it."

Very well, drink it then, and may it strangle you, thought Blondel, furious at the headstrongness of the substitute; and he raised his pistol with a trembling hand.

Barbeyrac and M. de Loiselay stepped back a few paces.

"Deslandes, take your position," said the old man, seeing Blondel, to whom had fallen the first shot, turning his cheek toward his opponent, while the latter did not make the slightest effort to cover his body.

The substitute had often read that a courageous warrior always faces danger. He interpreted this maxim in the literal sense, and turning himself square toward Blondel, he remained immovable, his heels drawn together, and his arms hanging down like a soldier carrying arms.

"Take your position," cried the old emigrant again.

Instead of changing his place, Deslandes looked at his second with an air of surprise.

"I think I am very well so," replied he.

At this proof of an ignorance which he had until then thought impossible, M. de Loiselay could not restrain an expression of impatience. He came suddenly to Deslandes, took him by the shoulders, turned him a quarter round, and made him present his right side to his antagonist. He showed him afterward the manner in which he must bend his arm and hold the pistol vertically, in order to cover as much as possible a part of his head and his bosom. Having placed him at last as he thought best, he went away, after having said in a low tone:

"Now do not stir, and try to be as small as you can."

What ceremony, thought the substitute, for the danger to which I am exposed. What matter is it, whether I am front or sideways.

If I miss, he may kill me, said Blondel to himself, at the same moment; when it is matter of life and death, there is no friendship in holding back—every one for himself.

He raised his arm, aimed his best, though his hand was not very firm, and drew the trigger of the pistol. The report was immediately followed by a piercing cry from the substitute, who dropped his weapon, staggered back and fell into the arms of M. de Loiselay, who ran to his assistance.

"You are wounded," said the old man, with emotion.

"Assassinated!" cried Deslandes, with a voice in which indignation was mingled with grief. "I am the victim of an infamous trick."

The wounded man raised his right hand, from which the blood flowed in abundance. At this sight he became very pale.

"Here I am, a cripple," said he, with an accent of agony; "I shall never be able to play the violin again!"

"Very well, you can play the horn," replied M. de Loiselay with vivacity—"it is no matter for the violin. Let us look at your hand. You have only broken your finger, the ring finger, the least necessary of all. What a singular shot!"

At the cry of the substitute, Barbeyrac and Blondel had hastened towards him, each on his side; the old emigrant stopped them with an imperative gesture—

"To your places, gentlemen, we have not finished."

Saying these words, he stooped to pick up the pistol which Deslandes had dropped; he examined a moment with curiosity the mark left upon the stock by the ball, and afterwards presenting the weapon to the substitute:

"You are very fortunate to have escaped with the loss of a finger," said he; "hold: if your wound prevents you from shooting, use your left hand."

Deslandes took the pistol with a gesture of rage.

"Perish the assassin," cried he, aiming at Blondel, whose respiration was suspended, until an inoffensive report assured him that the danger was over.

"Load the pistols again, this shall be a duel to the death!" cried the substitute, exasperated at the apparent treason of his friend.

"Calm yourself," said M. de Loiselay, gently; "I know by experience that it is very disagreeable to be wounded, but it is an unfortunate chance which must be taken; it was agreed that only one shot should be exchanged, and the laws must be executed, even by those who suffer. The affair is terminated; wrap up your hand in your handkerchief, and let us be on our way to Paris. The main thing now is to find a surgeon. I told this little gentleman he was wrong to neglect this precaution."

While the emigrant endeavored to appease the irritation of Deslandes, Blondel and his second hastened their preparations for departure.

"We must leave the wood separately," said Barbeyrac to M. de Loiselay; "two shots must have been heard, and without doubt, the alarm has by this time been given to the guards and the gens d'armes."

"I yield to your prudence, which appears to me to be astonishing, considering your age," replied the old gentleman, with a smile of mockery; "you can go if you please, on foot; we will keep the carriage."

Barbeyrac and Blondel speedily availed themselves of the consent of M. de Loiselay, who directly found himself alone with the young magistrate. The latter having wrapped up, as well as he could, his

wounded hand, both re-entered the carriage in which they had come to the scene of action, and were soon on their way to Paris.

"Well, Deslandes," said the old man, shaking his head, "do you now acknowledge the utility of the position that I made you take? If you had been placed as you were at first, instead of being touched on the finger, you would have received the shot in the middle of your breast."

"Would that it had been so," replied the substitute, whom pain had inspired with a disgust of life: "if I had died at that moment, I should not have had this infernal suffering."

"How do you know?" responded the old gentleman; "nobody is sure of going straight to heaven, and I fear the sufferings even of purgatory may exceed those of a broken finger."

"It is impossible," cried Deslandes, writhing on the seat of the carriage, while he convulsively pressed with his left hand his mutilated finger.

On returning home, the substitute found himself subjected almost immediately to the tortures which await the unfortunate duellist. A very skilful surgeon, who was summoned by M. de Loiselay, declared on the first examination of the wound, that amputation of the shattered finger was indispensable, and he proceeded to it without delay, notwithstanding the lamentations of the young magistrate, who, we must confess, showed but little stoicism on the occasion.

"To be maimed at my age," cried he, in a plaintive tone, when the operation was over.

"What is a finger?" said M. de Loiselay, by way of consolation. "In hunting, every day more serious accidents happen. What should you say if it had been necessary to take off a leg or an arm?"

At this moment the voice of the old gentleman seemed ferocious to the substitute, and his expression sanguinary. Instead of making any reply, he turned away his head, and maintained a ferocious silence.

In the afternoon, Messrs. de Rochelle and de Jonquieres presented themselves successively at the hotel of Deslandes; but, on learning that a duel had already taken place, and seeing their adversary *hors de combat*, they understood that there was no longer any motive for their visit, and both declared to M. de Loiselay, that they were satisfied, and regarded the affairs which were personal to them, as entirely terminated.

"You did not deceive me," said the old man to the young magistrate, with an air of congratulation; "there were three duels. Do you know that this day's work does you honor? you will long remember it."

"Sacristie! for the whole of my life," cried the substitute, from whom the pain in his hand extorted a horrible grimace.

For nearly a fortnight Victor Deslandes was made a prisoner by his wound, the different phases of which were successively accomplished, without any new accident. Of all the persons whom he knew in Paris, one alone, during these hours of suffering and ennui, gave him proofs of real interest in him. This was M. de Loiselay. Each day, the

old gentleman came to pass a part of the afternoon with his wounded friend. To amuse him, he brought one morning a chess board, and the two gentlemen were able to resume the quiet diversion to which they were accustomed to devote almost all their evenings at D***. The affectionate cares of the old gentleman made the conduct of Blondel, from whom he had not heard since the day of the duel, appear still more dark.

There must have been some diabolical machinations, somewhere, said Deslandes to himself, after having looked in vain during a week for a visit from his friend—our arrangements were too clearly made to allow the possibility of such a monstrous mistake. The fact of this pistol loaded with ball can only be explained by the abominable treason of which I was made the victim. Every thing seems to indicate that Blondel had resolved to get rid of me: but why? for what end? What have I done to him?

One of those ideas which reason repulses, but which fever accepts without debate, shot like lightning across the mind of the substitute.

Has he not money belonging to me, thought he, groaning at the idea; thirteen thousand francs which remain in his hands as a deposit, three thousand on the old account, and two thousand more which I lent him on the day of my arrival, make eighteen thousand francs, which he owes me. Who knows if it is not out of his power to repay me, and that foreseeing a demand for reimbursement, he has devised this duel as a means of acquitting himself, by killing me. It would be horrible, but there are such dreadful things done in Paris! The fortunes of Blondel, notwithstanding his display, appear to me very problematical. I do not know that he owns a rod of land, or a cent in the funds; the great speculations of which he is always talking, are subject to the chances of all operations of the kind, where people gain to-day, to lose to-morrow. On the other hand, he spends a great deal, he plays, he is a gambler, and an unlucky throw may do every thing. Yes: I cannot account for his strange conduct in any way, but by attributing it to some dark motive. If he did not feel himself guilty, he would certainly come to see me. His absence tells the whole story.

The same day that Deslandes had come to this conclusion, an unexpected avowal of M. de Loiselay showed him the injustice of it.

"Your adversary and his second have not had the politeness to pay you a visit?" said the old man to him.

"I have not seen either of them," replied the wounded man, with constraint.

"That does not surprise me: how could you expect proper conduct from people, who in a duel, load pistols with powder alone."

"What do you mean?" said Deslandes.

"Birds of a feather flock together, and I judge M. de Gustan from his second. Can you believe that this little gentleman thought it a very pretty thing to make you fight with cork bullets. Fortunately, I overruled these impertinences."

"Fortunately!" cried the substitute, looking at his arm in a scarf.

"Undoubtedly ; what is the loss of a finger, to the ridicule with which you would have been covered, notwithstanding your good faith, by a duel of this sort. Now I think of it, I would lay a wager that M. de Gustan was no stranger to this pretty idea ; he was pale as death when you fired at him, and I do not believe him of very firm nerve—besides, it appears to me very improbable, that a second should allow himself to play such a trick without being authorised to do it by his principal."

On learning that he might thank M. de Loiselay for his wound, Deslandes bestowed internally on the old man the most thundering anathema he could imagine, and then said :

"Blondel was deceived, as I was, without doubt : but since he has nothing to reproach himself with, why does he not come to see me ? Perhaps he has met with some accident."

The uneasiness which he felt on account of his friend, combined with that which he could not prevent himself from suffering when he thought of his money, would not allow him to wait until he was able to leave his apartment, to have his apprehensions cleared up. He resolved to write to Blondel, and sent him a note, scrawled with his left hand. To this epistle, he received no answer. This circumstance redoubled the anxiety of the substitute, who, seeing his purse growing almost empty, began to feel serious embarrassment at the disappearance of the depositary on whom he depended to fill it again.

He is undoubtedly passing some days in the country, said he to himself, attempting to tranquillize his mind ; but what can be the motive of his absence ? he makes no excuses : his conduct is selfish to a most revolting degree. It is the trait of a man without heart, a false friend. Certainly, I have never been under an illusion with regard to him, but I did not think him capable of behaving with this brutal carelessness.

Deslandes had soon another subject of uneasiness more serious than this. He perceived that the language of M. de Loiselay had undergone a complete metamorphosis, since the arrival of the old man in Paris. The advocate of ambition, of adventures, and bold attempts, had become, by some transition, the friend of retreat, of moderate life, of sober and quiet tastes. Instead of encouraging the substitute in his presumptuous hopes as he had formerly done, the emigrant let pass no occasion of numbering the rocks with which that ocean is strewn, which must be crossed by aspirants, before they reach the end of their wishes.

"For one who arrives in port, ninety-nine make shipwreck on the way," would he often say ; "and with how much fatigue, ennui, and discontent, does the one who succeeds purchase his success. In truth, man has no more cruel malady than that effervescence of his mind, which leads him to disdain the solid good which he possesses, to run after a fortune, which often proves illusory and chimerical."

Where is his sermon going to lead him, thought Deslandes, who, to make the old gentleman see his own contradictions, reminded him of

the advantages he had gained under the consulate, when he played the part of solicitor.

"Where one succeeds, another is ruined," replied M. de Loiselay, in a dogmatic tone. "In every thing, success is the exception ; beside," added he, with a sort of fatality, "it is not granted to every body to reach Corinth."

In the daily conversations of the two provincials, every time the ambition of the substitute took flight, like a kite whose string the school-boy is untangling, the old man, with a pitiless stroke, would pull down the ærostat already lost in the clouds. If Deslandes talked to him of the council of state, he would respond by speaking of the tribunal of the first instance at D***.

"Your leave of absence must be out," said he to him, one day : "have you asked to have it prolonged ?"

"Yes," replied the young magistrate, "but it was only an act of politeness on my part,—I have bid adieu forever to the court house at D***."

"It is best not to swear to any thing," replied the old emigrant, shaking his head. "After all, the place to which you still hold the title is a very good thing ; worst come to the worst, many others would be well content with it at your age : you are only twenty-seven, I believe ?"

"Pitt was prime minister at twenty-four."

"And Napoleon first Consul at thirty : I know that, but, I, who have made all the campaigns of the army of the princes, and who am now passed sixty-eight years, do you know what my rank is ? Captain, my dear friend, the cross of St. Louis, that I no longer wear, and a pension of five hundred francs ; here is every thing definitive which I hold from a career, which, between ourselves, has been a little more laborious than yours. You see that every body cannot become Pitt or Bonaparte."

According to the custom of those choice spirits who lay claim to place themselves out of the common law, Deslandes was not convinced of the justice of such a comparison. That M. de Loiselay had obtained in his military career only an inferior rank, appeared to him to be naturally explained by the mediocrity of the old gentleman ; but that he, full of intelligence and talent, should vegetate longer in a subaltern employment, this was evidently absurd, odious, revolting, impossible.

The good man has come down considerably in the last two months, thought he : formerly he understood matters ; he saw clearly ; his advice was generally very sensible ; but there is no longer any way of having reasonable conversation with him. Would he not persuade me, that I must esteem myself happy to have reached at my age, the glorious office of substitute to the King's attorney. I have seen the moment when he proposed to me to go back to D***—nothing from him will surprise me—he may advise me, one of these days, to marry Mad'llie Bescherin !

This laughable supposition, on which he could not pause for a moment, without a smile of pity, was the next day realized ; and notwith-

standing what he had thought, the young magistrate could not conceal his surprise, when M. de Loiselay, accosting him with that air of haste which the bearers of interesting intelligence usually wear, asked him :

"Do you know what is going on at D***. The little Bescherin has become a decided heiress. She has just buried her uncle, the grand vicar, who leaves her sixty thousand francs. My notary writes me this news, so it is certainly true. What do you say to it ?"

"I say that Mad'lle Bescherin is right to become rich, since it is impossible she should ever be beautiful."

"Do you think her so very ugly, then ?" asked the old gentleman, with an air of vexation.

"If I recollect rightly," replied the substitute, "I only follow your opinion, if I do."

"I assure you we were both too severe," resumed the emigrant, with an insinuating tone. "It cannot be said that she is pretty, but between remarkable beauty and revolting ugliness, there are many shades, and the face of Mad'lle Bescherin is certainly rather agreeable than otherwise. On the other hand, she has a fine figure ; I looked at her the other day, coming out of mass. She is of a very good height, and walks well. If she were only to pass three months here, to get some light on the science of the toilet, and manner, she would seem to you like a different woman. And then, what is a great consideration in a marriage affair, she has a very happy character. She is of a gay temper, gentle and equable, sufficiently intellectual, and as to principles, she has received one of those good provincial educations, more solid than brilliant, and which, after all, makes things better for the husband than all the fashionable nonsense with which they fill the heads of girls at the Paris boarding schools."

"Truly, sir," interrupted Deslandes, laughing ironically, "you could not speak to me otherwise, if you wanted to make me marry her."

"Who told you that I had no such desire ?" responded the old gentleman, looking directly in the face of his companion, to see what effect this unexpected declaration might have upon him.

"It is impossible for me to believe that you are speaking seriously. Permit me to remind you of what you said to me in your parlor at D***, a few days before my departure."

"At that time," interrupted M. de Loiselay, "the grand vicar was still living ; this is a point which should not be lost sight of. Circumstances having changed, why should not my views of them be modified. Counting what she may expect from her father, who will die of apoplexy one of these days, little Bescherin is at this moment worth not less than fifty thousand crowns, and such dowries are rare, even in Paris. I do not think that your fortune exceeds this."

"It scarcely amounts to so much," replied the substitute : "but you forget, sir, in this calculation, the spring that I may take forward in my career, the hopes I have a right to form."

"The hopes," interrupted the old man, with a smile which seemed tinged with secret pity,— "these things do not count on the exchange.

Nothing is more hollow, fragile, and deceitful, than the hopes of people in office. Let us fix then on what is positive, instead of rocking ourselves in illusions."

For several days the substitute had racked his brain to discover the cause of the change which had been wrought in the opinions of his old friend. He was struck with the accent with which these last words were spoken, and he could not help thinking that the old gentleman must have some unknown, but serious motive, which led him to preach to him in this manner on the vanity of those good things which office-seekers sigh after. He bowed his head, reflected for a moment, and suddenly felt himself illuminated by one of those ideas, which flit across the clouds of the mind, as lightning pierces those of the sky.

"Sir," said he to the old emigrant, while he fixed on him a piercing glance, "permit me to ask you one question. Are the counsels which you are so kind as to give me to-day, and which differ so much from those which I received from you some months since, the result of any conversation which may have taken place between yourself and Mad. Piard, respecting me?"

M. de Loiselay appeared embarrassed; but the natural frankness of his character triumphed over the hesitation which for a moment checked his answer.

"Oh—well—yes, my dear Deslandes," said he, with that accent of relief which a man uses, who feels himself freed from a burden, "you have put your finger on the sore, why should I not tell you the whole naked truth, instead of playing the diplomatist with you? Diantre—you are no child, and the firmness of your character is known to me. Here is then in two words, the state of the case: In the first place, my illustrious son-in-law, M. Piard, will not hear you spoken of; what have you done to him? I am sure I do not know. It seems he has sworn to you a very particular hatred. This would be nothing, but the most troublesome part of the business is, that Isaura, on this point, and it is perhaps the only one at present, entirely agrees with her husband. All my observations have been vain, and my paternal authority suffered a complete check when I attempted to disarm the antipathy, of which, right or wrong, you have become the object. 'I shall never take a step in favor of M. Deslandes;' these were the words of Isaura herself, and I will not conceal from you, that when she has pronounced a thing in such an absolute manner, it is extremely difficult to compel her to reverse her decision."

"I shall try however," said the substitute, whose energy, instead of sinking, became more animated.

"I wish with all my soul you may succeed," replied M. de Loiselay: "but I think you might as well attempt to put the Pantheon on the towers of Notre Dame. In this state of things, and seeing your projects threatened with a complete wreck, was it not right for me, who had perhaps encouraged you a little too much—was it not right for me to seek to gather up again the threads of another affair, the advantages of which to you, seemed to me very evident. If you marry Mad'llie Bescherin—"

"Your pardon, sir ! I am not yet condemned, and to the condemned they grant a reprieve sometimes. The name alone of Mad'lle Bescherin, throws my nerves into a dreadful state. It seems as if I were again losing my finger."

"I only look to your interest," replied M. de Loiselay, rising ; "now you know what to depend upon ; reflect then seriously on what I have said to you. If you want my assistance with President Bescherin, employ me, without scruple. You know my friends may depend on me on all occasions. I will serve you as a witness on your wedding day, with a still better heart than I did the other day in the Bois de Boulogne."

May the pestilence stifle you ! thought the substitute, who felt a disagreeable sensation at any allusion to his duel.

After the departure of M. de Loiselay, Deslandes dressed himself as rapidly as the state of his wounded hand would permit.

The doctor may say what he pleases, thought he : the fresh air and exercise cannot be worse for me than the anxiety I feel. I must see Mad. Piard this very day. I have a decisive battle to fight—what is to be the result of it, victory or defeat, I will find it out before this evening.

THE BANK OF FRANCE.

Report presented to the Annual Meeting of the Proprietors, by Count d'Argout, Governor of the Bank.

In a commercial point of view, the year 1840 was not free from vicissitudes. During the last six months, some uneasiness prevailed ; the transactions became less active, the discount on commercial effects diminished, but other operations assumed a greater extension. Taken together, however, the years 1839 and 1840 present nearly the same results.

	Francs.
In 1839, the mass of operations realized by the central bank and its branches amounted to	1,454,000,000
In 1840, they were	1,461,000,000
Total of the two years,	2,915,000,000
Difference,	7,000,000

The dividend paid in 1839, was 144f., and in 1840, 139f.

In 1840, the advances on canal shares, loans on rents, the discount on Mint bonds, and the advances on ingots, exhibit a more or less considerable increase.

The discount on commercial paper, obligations of the city of Paris, and bonds secured by the produce of forests, underwent, on the other hand, some diminution. These fluctuations will be seen by the annexed comparative returns :—

	1839.	1840.
	Francs.	Francs.
The advances on canal shares rose from	13,227,000 to	16,395,000
Loans on rents, from	19,850,000 to	46,356,000
Discount of Mint bonds, from	32,826,000 to	45,130,000
Advance on ingots, from	195,975,000 to	241,786,000
Total,	261,878,000 to	349,667,000

Those united augmentations form a sum of 87,789,000f.

On the other hand :—

	Francs.	Francs.
The discount on treasury bills and obligations of the city of Paris fell from	1,399,000 to	1,151,000
The discount on Forest securities from	5,244,000 to	2,595,000
And finally, the discount on commercial paper, from	1,047,054,000 to	928,534,000
Total, from	1,053,697,000 to	932,280,000

Those reductions amounted together to 121,417,000f., which exhibit a falling off in the operations of the central bank, in 1840, of 33,634,000f.

The greatest amount of bills *en porte feuille* was 201,000,000f. on the 31st of January, and the minimum 130,000,000f. on the 8th of June ; on the 31st of December it again rose to 151,000,000f.

610,600 commercial effects were discounted in 1840 by the Central Bank—that is, 27,800 less than in 1839. Their average amount declined from 1,639f. to 1,517f. ; and the average of the periods at which they became due from 57 days two-thirds to 56 days four-fifths. In this number 266,024 bills of from 1,000f. to 200f., and 63,247 of 199f. and under, were admitted.

The bills due at the end of the different months varied from 34,200f. to 40,600f. Those payable on demand amounted to 891,000,000f., or 16,000,000f. more than in 1839.

The various current accounts underwent great fluctuations. From the month of January to that of October, they rose from 54,000,000f. to 90,000,000f. In December, they had fallen to 61,000,000.

On the 6th of January, 1840, the Treasury was creditor to the amount of 170,000,000f., and on the 21st of March of 193,000,000f. From March to the 6th of November, this account progressively decreased to 105,000,000f. On the 30th of December it again rose to 114,000,000f.

The 6th of January, 1840, was the date of the *minimum* of the reserve, which was then 206,000,000f. ; on the 21st of March it had

reached 248,000,000f.; on the 17th of April, 249,600,000f.; on the 6th of November it still offered the sum of 237,000,000f.; and on the 30th of December it had fallen to 225,000,000f.

In comparing the movements of the reserve with those of the Treasury account, it will be found that between the 6th of January and the 21st of March, the Treasury account increased by 23,000,000f., and the reserves augmented in a nearly double proportion, having risen to 42,000,000f.; that between the 21st of March and the 6th of November, the Treasury withdrew 88,000,000f., and the reserves declined only 11,000,000f.; that, finally, on the 30th of December, the cash on hand exceeded nearly by 20,000,000f. that existing on the 6th of January, 1840, although at the first of those periods the Treasury was creditor of 170,000,000f., and at the second its credit only amounted to 114,000,000f.

The average of the reserve of the year was 258,900,000f., and that of the circulation 221,900,000f. The circulation of 1840 exceeded by 9,000,000f. that of 1839. From the 19th of March to the 31st of October, it fluctuated between a *minimum* of 201,000,000f. and a *maximum* of 251,000,000f.

The commercial bills unpaid in 1840, amounted to 48,493f.; 32,707 were reimbursed in the course of the year, and on the 1st of January last there remained due 15,785f.

The movement of the shares was more considerable than during the previous years. In 1839, 6,454 shares changed masters. In 1840, the number transferred to new owners was 16,805.

The ordinary administrative expenditure in 1839 rose to 1,020,000f.; in 1840, they were reduced to 971,000f. The diminution was 48,500f.; but, on the other hand, the administration in 1840 had to support an extraordinary expense of 101,800f., owing principally to the license-duty, which the Bank had to pay for the first time; to the stamp duty, imposed on the circulation of bills by the law of the 30th of June last; and some indispensable repairs.

The branch banks in the departments were progressing satisfactorily. The operations of those established at Rheims, St. Etienne, St. Quentin, and Montpellier, had amounted, in 1838, to 83,000,000f., and to 138,000,000 in 1839. They reached 179,000,000f. in 1840, having more than doubled in the space of three years. The gross produce of those four branches was 1,099,000f.; their expenses amounted to 253,000f., including 112,000f. for the cost of carriage of specie. The net produce was 836,000f., representing a dividend of 12f. 30c. per share.

Two other branch banks were opened in 1840, at Grenoble and Angoulême, but having commenced at a late period of the year, their operations had not covered the expenses of their establishment, the total loss having been 44,936f.

ELECTROTYPE.

This ingenious application of science to the practical purposes of art promises to effect a great revolution in the trade of print-selling. Formerly, a worn-out copper-plate could only be replaced by a new engraving; but, by this method of producing plates by galvanism, a copper-plate may be perpetuated, and, an engraving once made, an infinite number of other plates may likewise be formed by a mere mechanical process, and without any new expenditure of skill. Some of the engravers are said to feel alarm at this galvanic process, which threatens, they say, to throw them out of employ; but it may be observed, that the higher order of engravers, those who copy from paintings or originate their own designs, will have as fair a field as ever, and that the persons who will be injured will be chiefly those who make inferior copies from the works of their predecessors, so that art itself will be in no manner compromised, and the public will obtain an impression from a plate, which is the exact *fac-simile* of the original, at a cost which, now, would procure one of the humblest imitations. Mr. Palmer, the dealer in scientific apparatus, in Newgate street, has paid considerable attention to this art; but Mr. Williams, of Paternoster-row, seems to have made the most extensive application. Large impressions, representing a scene from Don Quixote, have been taken by Mr. Williams, both from the original and new formed plate, and it is impossible to detect any difference between them. The means by which this is effected are as follow:—The original engraving is immersed in the solution of sulphate of copper, and negatively galvanized, while a plain sheet of copper, positively galvanized, is placed in the same trough. By the galvanic action, the sheet is decomposed into a number of imperceptible atoms, which are precipitated on the engraving, forming a new sheet on which the design is taken in relief. The engraving is then removed, not having been in the least injured by the process, the plate with the design in relief is put in its place, and another sheet of copper is, in the same manner, decomposed and precipitated, forming a plate with an intaglio design exactly corresponding to the first. From this the impressions are taken, the plate in relief forming a matrix on which more plates may be made to any number. There is also a simpler method, likewise employed by Mr. Williams, in which the sheet of copper to be decomposed is not employed at all, but the same results are produced by the mere precipitation of the copper contained in the sulphate, the galvanic circle having been completed as before. The mere scraping away of the particles of copper which adhere to the edges of the two plates causes them to fall asunder.—*London Times*.

From the German papers it appears, that the electro-galvanic process has been applied by Herr von Puttkammer, the editor of a Berlin periodical called the *Volkfreund*, to the making of stereotype plates for letter-press printing. The saving is said to be considerable, as the

value of the sulphate of copper precipitated is trifling compared with the expense of casting plates in type metal, especially as the copper plate may be taken out of the sulphate trough when very thin, and can be made of any desired thickness by laying a coat of melted lead on the back.—*Liverpool Albion*.

IRON ORE AT DUANE, NEW YORK.

The properties of the Iron Ore found at Duane, in the state of New York, having attracted public attention, we here publish the Report of Professor Emmons, one of the Geologists appointed by the government of that state, made to the Assembly in March, 1840, in which the experiments made by him for testing the qualities of the ore are described.

“The following report is made in obedience to a resolution which passed the honorable house of assembly on the 4th inst., requiring the Geologists to ‘examine critically’ the iron ore, *known as the Duane steel ore*.

This ore is known in books by several names, as the *black oxide of iron*, *magnetic*, and *protoxide of iron*. Chemically considered, it is a mixture of the *two* oxides of iron; the *protoxide* and *deutoxide*. It is always associated with primary rocks, as granite, hypersthene, gneiss, and talcone slate. No instance has occurred in which it has been found in connexion with the sandstones or the later formed limestones.

In this state, we have at least six different species or kinds of iron ore, each of which occupy different geological positions: 1st, is the *magnetic oxide* of the primary rocks; the 2d, the *hematites* or *brown oxides*, of the slates and slaty limestones, as in Columbia and Dutchess counties; the 3d, *specular oxide* of St. Lawrence county, at the junction of the primary with transition; the 4th, the *argillaceous oxide* of the western counties in the middle portion of the transition; the 5th, the *carbonate of iron* which is found associated with the specular; and 6th, the bog ores formed in alluvions. Two of these different kinds have been called *steel ores*, the *magnetic* and the *carbonate*; inasmuch as they are susceptible of being converted into steel without passing through the process of *cementation*. The cause of this difference in the ores is to be ascribed to the fact, that the carbon with which the ore comes in contact during the process of reduction, combines chemically with the iron, forming a true carburet. In instances in which steel cannot be formed in this process, a mixture of carbon or caburet of iron is the result, which destroys the cohesion of the parts.

The susceptibility of the two ores above mentioned of being con-

verted into steel, it will be perceived is no new discovery, though it does not appear to have attracted that attention which it deserved.

The wootz, or Indian steel, so celebrated for edge tools, is from the same ore as the Duane steel ore ; a fact which is sufficient of itself to give us some confidence in the results which have been recently obtained.

Without occupying the time of your honorable body in general considerations, I proceed at once to what I suppose to be the question, or inquiry, contained in the resolution, 'are the castings of the Duane ore susceptible of being converted into good steel by any process ?'

In order to answer satisfactorily, the question, I made experiments both with the Duane ore, and that of the ordinary cast iron employed for stoves and other common purposes. A variety of tools were cast under my own eye, as *hammers, chisels, plane iron, shears, &c.*, which were treated in every respect alike, as in hardening, tempering, grinding, &c.

The three first instruments on which I carefully experimented were a *cold chisel*, a *plane iron*, and a common *penknife*. The first instrument, after being prepared by tempering in oil, I tried upon a large bar of cold malleable iron. I cut out many thin slices without producing *flaws, fractures or cracks*, or crumbling along the edge. On trying the chisel made of ordinary cast iron treated in the same way, it broke with the third or fourth blow, and was soon entirely destroyed. The last result was anticipated ; but the one obtained by the instrument made of the Duane metal, was unexpected, and I consider it as the severest trial to which it could be put. Notwithstanding, however, the favorable result of this and other trials of the same kind, I doubt still, whether this metal can possess sufficient tenacity to withstand for a length of time this kind of usage. The jar and concussion from heavy blows of the hammer, must, after a little time, destroy the cohesion of the particles.

The two *plane irons* were then tried, and I found that the one made of the Duane ore could be used for planing the hardest seasoned wood, as walnut, oak, black walnut, and pine with knots, without breaking the edge, while that of the ordinary cast iron was soon so much injured as to become useless.

The common *penknife* proved equally good. Here were three results which were successful, but I knew of some which were failures ; the inquiry now came up concerning the cause of those failures, and whether there was a probability of obtaining, by careful treatment, uniform results. I conceived that it was possible the failures might be owing to want of care in tempering. To settle this question, I obtained those instruments which had failed, and re-hardened or tempered them again. I found by this course, that they became excellent tools, showing, as I think, conclusively, that the difficulty and failure was not to be attributed to *the material*, but to the want of judgment in tempering, as I had supposed.

Another trial to which this steel has been submitted, and which is next in severity to that of the cold chisel, is that of *turning iron*. This

result too, has been equally satisfactory with the above. These, however, are not all the experiments which have been made. It has been my object to ascertain the character of castings in their different states; their susceptibility of being hardened and then softened by exposure to heat; the different degrees of hardness of the metal, and the exact amount of hardness which could be communicated, not only to this, but several other kinds of castings; its elasticity and strength; in fine, whatever might be interesting in the several points of view in which it might be regarded. I did not conceive it necessary to communicate all the experiments and facts at this time, but I would be understood as having committed myself fully in this matter, and to be satisfied myself that the Duane steel ore is capable of being converted into good edge tools, by the process which is well known to have been pursued, and which has been alluded to in this communication.

In conclusion, I beg leave to offer the following remarks.

1st. Edge tools made from the Duane ore differ in two particulars from those made of ordinary cast iron: 1st, in not crumbling along the edge when ground, and 2d, in carrying a *feather edge*.

2d. The change from cast iron to steel takes place during the process of tempering, as is evident from inspection; the portion of the tool which is not tempered is of a dark grey, while that which has been submitted to this process is light grey, and of a finer grain.

3d. The principal reason why several mechanics, in this city, have expressed unfavorable opinions of this steel, is owing to the fact, that the tools which were put into their hands were not properly tempered. It was owing to this circumstance, that my own opinion was also unfavorable.

4th. This subject becomes more important when we consider, that many other deposits of ore in the North will probably furnish equally satisfactory results.

5th. In one respect the castings of tools in the Duane process has an advantage over the cast steel; it does not injure the material by frequent tempering and working, whereas, the more cast steel is worked, the more it deteriorates.

6th. The Duane metal may be hammered and flattened, without breaking, at a low, red heat, which may be useful in giving greater compactness and strength to a tool.

7th. The process to which the Duane metal was submitted at the Troy Nail Factory, must be considered as a very successful experiment, proving the ability of the ore of being converted into the softest malleable iron, suitable for nail rods and other uses where softness and toughness are desirable properties; for I hope very few are so ignorant as not to know that the process of *puddling* is the *true* one for making the best malleable iron, and no one could suppose that *steel* could, by any means, have been made in this mode. This process would have perfectly converted *the best of steel to iron*, by being *decarbonized* during its exposure in the furnace.

The above is respectfully submitted.

EBENEZER EMMONS,

Geologist for the 2d District.

VOYAGE OF THE BRITISH STEAMER NEMESIS TO THE ISLAND OF CEYLON.

From the Colombo Observer, Oct. 12, 1840.

In this splendid vessel, commanded by Captain W. H. Hall, we have the pleasing task of welcoming to our shores the first iron steamer that ever rounded the Cape of Good Hope. She is the largest of her class built, being 168 feet long, 29 feet beam, and 650 tons burden. The engines are 120 horse power, by Messrs. Foster and Co., of Liverpool, and, of course, upon the best construction. Twenty days' coal can on any emergency be stowed in her. She carries two medium 32 pound pivot guns, one after the other forward, and 10 swivels; and is manned by 50 seamen. When launched she drew only 2 1-2 feet water, and may still be lightened, if necessary, to 4 1-2 feet. Being nearly flat-bottomed, and fitted with iron hawse holes for cables in the stern, she can be run on shore and easily got off again by anchors, which contrivances will enable her in many cases to land troops without the assistance of boats. Though thus round-bottomed, two wooden false keels of six feet in depth can be let down through her bottom, one after the other, forward. These, together with a lee-board invented by Captain Hall on the voyage, prevent her, in a considerable degree, from going to leeward. The rudder has a corresponding construction, the true rudder going to the depth of the sternpost, and a false rudder being attached by a pivot to the former, so that it can be triced up or let down to the same depth as the false keels. The floats are easily unshipped, and under canvass, with the wind free, she can go 9 or 10 knots an hour. The vessel is divided by water-tight divisions into five compartments, so that though even both stem and stern were stove in, she would still float. Her accommodations and arrangements of small arms are splendid, and large coalholes being placed both between the officers' quarters and the sailors' berths and the engine-room, the heat of the fires is not at all felt. The *Nemesis* left Portsmouth with secret orders on the 28th of March, and reached Madeira in seven days, where she took in coals, then proceeded down the coast of Africa, steaming or sailing according to circumstances, but she experienced principally adverse winds and currents. At Prince's Island, a Portuguese settlement, she took in 70 tons of wood, which with the remaining coals, lasted till she came into the latitude of St. Helena, when she proceeded under canvass in order to make the best of her way to Table Bay, thus facing the Southern Ocean at the very worst season of the year.

She arrived at Table Bay on the 1st of July. The Governor and suite having gone on board, she slipped from her anchorage and steamed round the bay, trying the different range of her guns. His Excellency was landed on the jetty, alongside which the *Nemesis* was brought. Having taken in about 200 tons of coals and water, she left Table Bay on the 11th of July, and, whilst rounding the Cape, as was

to be expected at that most unfavorable season, experienced several gales of wind. One of these in particular was most tremendous, but to the agreeable surprise of those on board, the steamer proved to be an admirable sea-boat, rising over the immense waves with the greatest buoyancy, and shipping little or no water. She, however, received so much damage in these gales, that Captain Hall put into English River, Delagoa Bay, to repair and refit. This occupied three weeks, but was done most effectually by those on board, as she carries first-rate artificers and ample means at their disposal. There was a slaver in English River at the time, but Captain Hall had no authority to seize her.

At Delagoa Bay some sailors belonging to an American schooner, that had been wrecked about 60 miles to the northward of English River, applied to Captain Hall for a passage. It appeared that the schooner had been purchasing ivory and gold dust in a river, where she struck. The captain and part of the crew endeavored to proceed in a boat to Delagoa Bay for assistance, but could not pass the surf upon the bar. Most of the people got fever, and several of them died, when the second mate, who was the only other person able to undertake the journey, volunteered to accompany the captain by land for aid. Being so few, these two considered it safer to go unarmed, so as not to afford the natives any temptation to molest them. At first the natives appeared kindly intentioned, but afterwards fell upon them suddenly with their spears. The captain soon fell and was killed; but the mate, presenting his side, received most of the spears on his arm; one, however, struck him near the eye, and he also fell dreadfully wounded. The natives now proceeded deliberately to cut up the captain, roast the pieces of his body, and make their supper of him; all which process the mate witnessed, and supposed that they intended to eat him in the morning. The unfortunate man, however, made his escape during the night, and returned to the schooner. Those of the crew who survived now again took to the boat and succeeded in reaching the Portuguese settlement at Delagoa Bay, at which place two of them volunteered on board the steamer; but the mate, not having sufficiently recovered, preferred remaining behind.

From Delagoa Bay, the *Nemesis* proceeded to Mozambique, where the Portuguese Governor was received on board with due honors. The visit was the more gratifying to all parties, as his Excellency, who had lately arrived with instructions to put down the slave trade, had given proof of his intentions so far as lay in his power to suppress the nefarious traffic in human flesh, by condemning two splendidly built slavers whilst the *Nemesis* was there. He also gave Captain Hall the pleasing assurance that the sight of his steamer would greatly dishearten the persons engaged in the slave trade, for they would now see that their vessels were no longer safe in the river, as steamers so powerfully armed could follow them over the bars, where the men-of-war could not approach. It was even supposed that the *Nemesis* had been especially despatched after slavers from Rio.

From Mozambique the *Nemesis* continued her voyage towards In-

dia, calling at Johanna, to the Sultan of which she rendered some assistance against a Madagascar chief named Raminy-tuk, who having been allowed by the former Sultan to reside on the island, was at the head of a strong party anxious to depose the present Sultan. The inhabitants, many of whom speak English, inquired after the health of Queen Victoria and Prince Albert, and asked if Her Majesty had had a son. They also expressed a strong desire to put themselves under the protection of England.

From Johanna the *Nemesis* came direct through the Maldivé Islands to Ceylon, sighted Colombo on Monday morning, the 7th, and reached Point de Galle the same afternoon. Her officers and crew (amongst whom are three Kroomen from the coast of Africa—probably the first of their race who ever came to the eastward) are all in excellent health and spirits; and, judging from a short acquaintance we have had the pleasure of enjoying with their commander, we should anticipate for them a most agreeable period of service under Captain Hall.

The *Nemesis* will have to wait a few days at Point de Galle until the arrival of commissariat and other stores from Colombo, when it is supposed she will proceed to Singapore, and ultimately to China.

Lieut. K. W. Stewart Mackenzie, aid-de-camp to his Excellency the Governor, goes in the *Nemesis* with the intention, we understand, of joining the force acting against China, as a volunteer.

CHRONOLOGY.

FOREIGN.

ERIVAN AND MOUNT ARARAT.—A German journal, on the authority of a traveller, who has lately visited Armenia, gives the following particulars respecting the devastations caused by the great earthquake, which took place on the 2d of July last:—"After a journey of 50 days, I reached Erivan, the population of which amounts to about 12,000. The trade carried on is principally in the rich fruits of the district, which are exported to Persia and Georgia. The citadel, constructed of earth, as are all the houses of Persia and Armenia, could be defended with advantage, yet it was found incapable of withstanding the attack of Prince Paskevitch, who took it by storm in 1827.

Erivan has not suffered much from the last earthquake, but from that city to Mount Ararat, a distance of 30 versts, all the villages are destroyed, and I rode through a uniform series of ruins without being able to find a house in which I could pass the night. I visited Mount Ararat, and saw the immense sunk spot or downfall whereby the whole village of Akuri was swallowed up, with its 3,000 inhabitants, not one of whom was saved. Not a trace of their dwellings remains; as little is there any vestige of the church, which was regarded as particularly sacred by the Armenians, as they believed that it was built on the spot where Noah made his first sacrifice to God, after the flood. There is also nothing to be seen of the celebrated monastery of St. Jacob.

All has disappeared, and the only thing that presents itself to the view of the spectator is a vast mass of earth, stones, sand, and volcanic debris. Armenia has not experienced such a misfortune since the eighth century. During more than four months, earthquakes continued to be felt, and the inhabitants of the destroyed villages cannot yet venture to rebuild the houses. From this scene of ruin I proceeded to Nakitshevan, and found that town, which, though of little commercial importance, had 6,000 inhabitants, also destroyed. It was with difficulty I could find a house capable of sheltering me during the night."

The following description of the above mentioned earthquake has been published at St. Petersburg.

"About sunset, on the 2d of July, a violent earthquake occurred in the Armenian province, which lasted nearly one minute. The village of Achhuri, situated on the declivity of the Ararat, in the Surmanlinsk district, with the whole of its inhabitants, the more elevated cloister of St. Jacob, and the house of the former Sirdars (governors) were completely overwhelmed by the masses of earth, stone, and ice, which rushed down from the mountain. Inundations of melted snow, mixed with mud, flowed over the neighboring fields, totally covering them, and destroyed all the grain and fruits within a circuit of more than ten versts. In the Schursk district also, at seven o'clock in the evening of the same day, no less than 3,137 houses with all subsidiary buildings, were levelled to the ground by the earthquake, whereby 13 men, 20 women, and 253 head of cattle perished. The loss of property to the inhabitants of this district is estimated at 43,929 silver rubles. At the same moment the shock was felt in the fortress of Shusha and other parts of the Karabacha province, where it also lasted exactly a minute. The fortress sustained no damage; but in the province one church and 169 inhabited houses were destroyed. The eastern wall of the ancient Armenian convent of Tatuvska gave away, along with the roof, from which the carved stones rolled down, and the towers were demolished. The rocks in the neighborhood of the villages of Shingen sank down, by which an Armenian, two women, and a great number of cattle were killed; immediately after, the whole of the road to the village was covered and closed up. As yet the inhabitants can only communicate with each other by means of ropes. In the Talusin

Khanat, the town of Concoran and its neighborhood experienced three heavy shocks, one after the other, which lasted longer than a minute, but did no damage. In Alexandropol, in Tiflis, the earthquake was likewise felt, but there, too, it was attended by no injurious consequences. Throughout the whole district of Surmanlinsk, but chiefly in the villages near Mount Ararat, slight shocks of two or three minutes' duration were daily observed from the 3d to the 8th of July. On the 6th, a second downfall of Mount Ararat took place, in consequence of which, vast rocks, stupendous blocks of ice, and immense floods of water rushed down with such rapidity and force, that in a few minutes everything that stood in their way was destroyed. Great streams of the various substances thrown up extended over the surface of more than twenty versts. The inhabitants of the numerous villages in the Surmanlinsk district, situated at the foot of the Ararat, are left destitute by the devastation of their houses. Though the torrents rushing from the mountains did not reach all the villages, yet the corn fields were dreadfully injured by the snow-water mixed with mud. The General Commanding-in-chief in Georgia, has sent Major Voskobanikoff to Mount Ararat, to make a correct survey, and collect on the spot all the details of the earthquake."

Jan. 4. The steamer *Thames*, on her passage from Dublin to Plymouth and London, ran on the S. W. rocks, off Scilly, on Monday morning, in a snow storm, and was dashed to pieces and entirely lost, together with her cargo and the whole of the crew and passengers, with the exception of two stewardesses, one lady passenger, and one man.

The following are the particulars of this disaster. The *Thames* departed from Dublin on the afternoon of Saturday, the 2d instant, with a general cargo, four cabin passengers, and a number of recruits and deck passengers, making altogether, with the captain and crew, sixty-five individuals. On the morning of Monday, the 4th, the captain and mates having mistaken the St. Agnes Lights for the Longship's Light at the Land's end, the vessel got entangled amongst the rocks of the Scilly islands, near Rosevear. The wind blew strongly from the north-east, and about four o'clock, A. M., the vessel having gone over a ledge of sunken rocks, a heavy sea broke into her, and nearly filled her, extinguishing her fires, and rendering her completely un-

manageable. The captain ordered the sails to be set, in the hope of working her through a narrow passage, but, being waterlogged, she went broadside on a reef called the Jolly Rock. A boat, from St. Agnes, which, at great risk, reached the wreck, took on board Miss Morris, who was one of the cabin passengers, and Miss Myers and Mary Gregory, the two stew-ardesses. The boat's crew dared not ap-proach close to the vessel, fearing a gen-eral rush, and the females were, therefore, drawn through the water by a rope. The boat, after buffeting with the tempest for several hours, and being nearly lost, was, at length, observed by a pilot boat, and towed safely into St. Agnes. There were only two boats in the steamer, one of which was unfortunately staved in. The other was stealthily taken possession of by a number of the recruits, but was swamped soon after she had put off from the vessel, and all who had ventured in her perished. The violence of the wind, hail, and snow, precluded all hope of fur-ther assistance from shore; the flood had set in, the fore part of the ship was im-mersed in the waves, and the vessel show-ed symptoms of parting. The captain and about twenty men got into the main rigging, soon after which the mainmast gave way, and all who had sought this refuge were precipitated into the sea and drowned. The remainder of the crew and passengers were crowded on the quarter deck, which, about eleven o'clock, was washed off bodily by the waves. It parted into three pieces, on one of which, (supposed by those who saw it from the shore to be a raft) about seven individu-als were clustered. They were floated quickly to Rosevear, a small uninhabited island, where the planks were dashed against the rocks, when all, except Ed-ward Kearns, a seaman, perished. He contrived to cling to the rocks till the waves had subsided, when he climbed be-yond their reach. He was taken off by a boat next morning, with about eight or ten bodies which had been washed upon the rocks. An inquest was held at St. Agnes on the bodies washed ashore and picked up, and they were all interred upon the island.

COMPARATIVE REVENUE OF ENGLAND AND FRANCE.—The following compara-tive table of the revenues of England and France for the year just expired is given by the *Quotidienne*. It is obtained for the former country from the official published returns, and for the latter from the budget for 1840. The sums are in

francs, 25 of which are equal to a pound sterling;

	England.	Fr. nec.
Customs,	493,858,500	168,195,000
Stamps of all kinds,	165,897,550	225,150,200
Excise in direct taxes,	314,384,300	230,720,000
Direct and as-sessed taxes,	98,661,100	392,764,951
Post Office,	11,025,000	45,188,000
Crown lands,	4,187,500	
Public Instruc-tion,		4,165,500
Various products,	4,942,000	11,308,900
Loans and repay-ments,	26,113,000	
Extraordinary means,		57,255,292
Woods and fish-eries,		34,577,632
Total,	1,118,600,000	1,184,523,365

GRAND JUNCTION, AND LIVERPOOL AND MANCHESTER RAILWAYS.—The re-port of the Grand Junction Railway, for the half-year ending the 31st of Decem-ber, exhibits an increase of the receipts and a decrease of the expenditure as compared with the corresponding part of the year 1839. The receipts from coach-ing during the last six months of 1839, amounted to £187,476 8s. 5d., and during a similar period in 1840, to £188,620 15s. 5d.; from goods in 1839, to £35,220 10s., and in 1840, to £40,934 2s. 1d.; from live stock in 1839, to £3,607 5s. 8d., and in 1840, to £3,008 10s. 11d., being the only item in which a decrease is shown. The totals are £226,304 4s. 1d. in 1839, and £232,563 8s. 5d. in 1840, while the ex-penditure is £99,627 1s. 7d. for the for-mer, and £107,880 10s. 5d. for the lat-ter, the saving being chiefly in the item of locomotive power. The net income, after deducting all expenses, the interest on the unliquidated debt included, is £137,481 11s. 2d., enabling the directors to declare a dividend of £6 10s. per £100 share. As it was considered that some of the proprietors might not be satisfied with the dividend of £6 10s., the chairman, after the report had been read, explained that £32,845 was now paid to the proprie-tors in addition to any former half-year—viz., to the Chester and Crewe, on new quarter shares, and upon the £10 call upon the half-share during last year. He then showed that a proprietor, in addi-tion to his £6 10s., got £1 on each of his new quarter shares, or that if these

were sold, he had in his pocket from £30 to £35 for each.

At the meeting of the proprietors of the Liverpool and Manchester Railway, the accounts showed that the total receipts of that line were but £139,323, being about £4,000 less than during the last six months of 1839, which the directors account for by the late depression of trade, the unfavorable state of the weather, and the diminution of the number of coach parcels, through the Penny Postage Act. On the other hand, however, it is shown that the expenses have lessened in a still greater proportion, so that the net profit is £70,629, being £7,600 above that of the net proceeds of the corresponding period last year. The directors recommend a dividend of £5 per share, amounting to £60,446 5s., leaving a balance, out of which it was recommended that £2 per share should be paid to the proprietors of the original £100 shares, and 4s. to the holders of the old £25 shares—a portion of the interest to which these shares only are entitled.

LOCOMOTIVE PERFORMANCE IN BELGIUM.—A locomotive engine called *la Fleche*, was placed in service on the Belgian railroad in May 1835, and from that period to November last it was run 16,569 leagues, of 5,000 French metres, [51,488 miles] and the cost for repairs during that period only 9,361 francs. This is cited in the Paris journals as an example of remarkable performance. More remarkable examples, however, might be cited. The locomotive *Meteor*, built at Lowell, Massachusetts, ran on the Boston and Worcester railroad, from Jan. 1, to Dec. 31, 1841, 30,152 miles, and the cost for repairs was only \$679.

The locomotive *Lion*, on the Boston and Worcester railroad, ran from Jan. 1836 to Dec. 1840, inclusive, 82,493 miles. The six locomotive engines, just placed on the Boston and Lowell railroad, ran from the year 1835 to 1839, inclusive, 382,840 miles, making an average distance of 55,473 by each engine.

RAILWAY IN ITALY.—On the railway from Milan to Monza, the number of passengers from Oct. 23, to Nov. 28, a period of 36 days, was 34,926. The amount of receipts in the same period was 33,622 Austrian *lires*. From Nov. 29, to Dec. 27, the number of passengers was 20,333, and the amount of receipts 19,244 *livres*. The Austrian *livre*, of the Lombardo Venetian kingdom, is about 16½ cents.

SPANISH NATIONAL DOMAINS.—There were sold in Spain, during the month of

November last, 933 national domains, which were previously valued at 10,251,188 reals. The produce of the sales was 27,179,166 reals. These added to the sales of the preceding months, make 35,159 domains which have been sold, the valuation of which was 623,082,691 reals, and the sales have produced 1,375,347,543. These results afford a favorable indication of the state and prospects of the country as well as of the prospects of the national treasury, for the benefit of which, these sales are made.

COMMERCE OF GREAT BRITAIN.—A document prepared under the direction of the Board of Trade, and laid before Parliament, exhibits the following facts in relation to the trade and navigation of Great Britain for the year ending Jan. 5, 1841, compared with corresponding results of the preceding year.

The total declared value of our Exports for the year ending Jan. 5, 1840, was	£45,307,409
Year ending Jan. 5, 1841,	43,924,958
Less in 1841,	£1,382,451

The cotton manufacture in the first-named year was £17,692,183 against £17,561,711 in the last; Cotton-yarn £6,858,193 against £7,099,468 in the last; Hardwares and Cutlery £1,828,521 against £1,345,881; Linen manufactures, £3,414,967 against £3,304,545; Metals, iron and steel, £2,719,825 against £2,508,526; Woollen manufactures £6,271,650 against £5,336,275.

The produce of the customs was—

Gross receipts inwards, year ending Jan. 5, 1840,	£23,278,089
Duties outwards,	127,182

£23,405,271

Year ending Jan. 5, 1841, the gross receipts inwards were	£23,466,117
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Duties outwards, 118,257	
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23,584,404

Increase in year ending Jan. 5, 1841,	£179,133
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The net receipts were, year ending Jan. 5, 1840,	£23,681,680
" ending Jan. 5, 1841,	23,271,848

The ships employed in the foreign trade were:—

ENTERED INWARDS.

Year ending 5th January, 1840: ships,

23,114; tonnage, 3,957,468. Year ending 5th January, 1841: ships, 22,725; tonnage, 4,105,207.

CLEARED OUTWARDS.

Year ending 5th January, 1840: ships, 18,424; tonnage, 3,085,752. Year ending 5th January, 1840: ships, 19,710; tonnage, 3,392,626.

Ships employed in the coasting trade:

ENTERED INWARDS.

Year ending 5th January, 1840: ships, 130,254; tonnage, 10,610,404. Year ending 5th January, 1841: ships, 133,299; tonnage, 10,766,056.

CLEARED OUTWARDS.

Year ending 5th January, 1840: ships, 142,895; tonnage, 11,266,073. Year ending 5th January, 1841: ships, 146,127; tonnage, 11,417,991.

It appears further from the document above referred to, that the quantity of foreign wheat imported in 1839, to make up for the deficient harvest of 1838, was 2,634,557 quarters, which, calculated at an average of 60s. per quarter, gives £7,903,671 as the price, which may be said to have been paid to foreigners in hard bullion. The duty received on that amount was only £631,698, while for less than two millions of quarters, the duty received last year was £725,045.

The duty on raw silk shows an increase for last year of £2,000; and that of manufactured silk has also improved nearly to the same amount. The India silk trade exhibits a serious falling off, the duty having diminished from £17,000 to £13,000.

The sugar duties also have decreased considerably. The import of East India sugar is less last year than the year preceding, but the quantity entered for home consumption, is greater, and the amount of duty received proportionably increased.

AMSTERDAM AND HARLEM RAILWAY.

—The number of passengers conveyed on the railway from Amsterdam to Harlem from Jan. 1, to Dec. 31, 1840, was 349,994; and the amount of receipts, 168,833 florins, [\$67,533]. In the month of December, the number of passengers was 13,296; amount of receipts, 6,600 florins.

MANUFACTURE OF SUGAR IN FRANCE.

—The *Paris Moniteur* publishes a return of the produce and consumption of domestic sugar during the year 1840, including the month of January, 1841. The number of manufactories existing in France on the 31st of that month was

388, of which 155 belonged to the departments of the North, and the rest were divided among 41 other departments; 31 had ceased working during the year, but had still some sugar on hand. The quantity manufactured during the above period, was 18,612,870 kilogrammes, [39,832,000 lbs.] and that sold for consumption, 12,733,429; leaving 9,982,027 unsold, including the 4,102,656 lying over since last year. The duties levied in January, 1841, amounted to 569,988 francs.

A statement is given in the *Commerce* to show, we suppose, the comparative importance of the trade of Paris with the United States of America over that with Great Britain, from which it appears that the exports of goods to the former during the month of January had been of the value of £101,500 sterling, and with the latter of the value of £16,000 only.

Feb. 2. Died at his residence, Woolwich Common, near London, Dr. Olinthus Gregory, an eminent author, well known in the mathematical world.

Dr. Gregory was born at Yaxley, in Huntingdonshire, Jan. 29, 1774, of respectable parents. At the age of 19, shortly after he left school, Mr. Gregory made his first attempt as an author, and his *Lessons, Astronomical and Philosophical, for the Amusement and Instruction of British Youth*, were submitted to the public, after having received many hints for their improvement by the Earl of Carysfort, who afterwards proved a valuable and steady friend to the young student. At the age of 20 Mr. Gregory prepared a treatise on the sliding-rule, and its most useful applications. The manuscript was offered to a London bookseller, who submitted it to Dr. Hutton, and although it was not published, it was the means of opening a correspondence and laying the foundation of a friendship between them, which was only terminated by the hand of death. About the year 1794, Mr. Gregory became acquainted with several distinguished students at Cambridge, one of whom was the present Lord Lyndhurst. With these he corresponded, and they explained to him the substance and extent of the whole course of study which was then pursued by an undergraduate of Trinity or St. John's College, one of which they urged him to enter; but certain scruples which he entertained at that period, induced him to abandon all idea of becoming a minister of the established church. In 1798, Mr. Gregory proceeded to Cambridge, to assist the editor of a provincial paper; but this employment not being

very congenial to his taste, he relinquished the situation after a few months' trial. He then opened a bookseller's shop, and announced his intention of teaching mathematics, with the resolution to follow that department alone which should prove most successful. The encouragement he met with induced him to dispose of his books at the end of about one year, and devote his whole time and talents to his duties as a preceptor. In the spring of 1801, he wrote a treatise on astronomy, and dedicated it to his friend, Dr. Hutton. This work, in one volume octavo, was favorably received by the public, and its merits brought the author into notice among the London booksellers, who made many literary proposals to him. In the year 1802, the Stationers' Company consigned to Mr. Gregory the editorship of the *Gentleman's Diary*, and another of their almanacs. About the same time he undertook the general editorship of the *Pantologia*, a comprehensive dictionary of arts and sciences. In December of the same year, on the enlargement of the Royal Military Academy, for the instruction of gentlemen cadets at Woolwich, Mr. Gregory was appointed mathematical master through the influence of Dr. Hutton. Shortly after this period he received from Marshall College, Aberdeen, the degree of M. A., as a tribute of respect to his merit; and about three or four years afterwards, on presenting the same college with a copy of his *Mechanics*, and the first volume of his *Pantologia*, he received the further degree of LL. D. Dr. Gregory gave such satisfaction at the Royal Military Academy, that he was gradually promoted through the intermediate stages to the Professor's chair, which he filled with the highest reputation until obliged through ill health, brought on by intense study, to resign it in June, 1838. Since that period he has seldom undertaken any public duty, the last time he appeared in that capacity being in the latter end of 1839, to deliver a lecture for the benefit of the Woolwich Institution, a society of which he was elected President on its formation. Dr. Gregory's constitution, although naturally strong, gave way under the heavy task imposed upon it, and for the last month every day was looked upon as his last. The kindness and fostering care extended to young men by this eminent mathematician will long be remembered by many who have, like him, raised themselves by their own exertions. Dr. Gregory was the author and editor of a great number of works and

papers on the arts and sciences. From the year 1817, he had the whole of the general superintendence of the almanacs published by the Stationers' Company, which had been for a long period conducted by Dr. Hutton. He was also one of the twelve gentlemen who had the honor of establishing the Astronomical Society of London. A widow, two sons, and one daughter, remain to mourn the loss of an affectionate husband and father.

Feb. 9. The marriage of the Count of Nassau, (ex-King of the Netherlands) to the Countess Outremont, was celebrated at Berlin. The ex-King is 70 years of age, and the Countess 50. He proposes to proceed in the spring to his estates in Silesia, and there take up his residence.

Feb. 10. The christening of the Princess Royal took place at Buckingham Palace, according to previous appointment, with due ceremony, in presence of the distinguished guests invited to the banquet given on the occasion. The water used was brought from the river Jordan. The ceremony was performed by the Archbishop of Canterbury—the Archbishop of York, and Bishops of London and Norwich, and Dean of Carlisle, assisting. The Duke of Wellington, who had so far recovered from his recent attack as to be present, officiated as sponsor for the Duke of Saxe Coburg Gotha. The other sponsors were the Queen Dowager, the Duchesses of Gloucester, and Kent, the King of the Belgians, and the Duke of Sussex. The name given to the Princess was Victoria Adelaide Mary Louisa.

MONTREAL, Feb. 10. UNION OF THE CANADAS.—Lord Sydenham, Governor General of British North America, this day took the oath of office, as Governor of Canada, under the Act for the union of Upper and Lower Canada into one Province, on which occasion a salute of nineteen guns was fired. The Governor held a levee at 2 o'clock, at which a great number of gentlemen were presented, and a ball in the evening. On the same afternoon he issued a proclamation announcing the fact of having assumed the Government, and exhorting the inhabitants of the Province to unity of sentiment and action, in cultivating the advantages which they enjoy, under their form of government, and their connexion with the British empire.

Feb. 12. The Austrian garrison which for several years past has occupied the free city of Cracow, has been ordered to evacuate the place. The citizens of Cra-

cow greatly regret the approaching departure of the Austrian garrison, which is easily accounted for by the fact that the troops cause a large sum of money to circulate; it must be stated too, that the conduct of the troops has been most exemplary, and that they have acquired a just claim to the esteem and regard of the inhabitants of the republic. We hear that, on this account, an address of thanks and a farewell entertainment will be given them.

Feb. 16. The trial of the Earl of Cardigan, for fighting the duel with Capt. Tuckett, came on in the House of Lords. The room in which the sessions are temporarily held, having been fitted up at an expense of some thousand pounds for the accommodation of spectators, consisting mostly of peeresses and other ladies, the Lords assembled on the 16th for the trial, in their robes, wearing the collars of their orders, and all in cocked hats. Lord Denman, as Lord High Steward, presided—the Attorney General and Mr. Warburton conducted the prosecution—and Sir William Follett, Mr. Sergeant Wrangham, and Mr. Adolphus, appeared for the defence. The indictment contained three counts, charging the prisoner with firing at Harvey Garnett Phipps Tuckett, with intent to kill and murder him—the second with firing at him with intent to maim and disable him—and the third with intent to do him some grievous bodily harm. The whole transactions of the duel were proved by three witnesses, who were casual spectators, and viewed the whole, including the loading of the pistols and firing twice in succession. One of the witnesses was a constable of the parish, who came up immediately after the second shot, having been witness to both, and arrested all the parties, (five in number, including the surgeon,) in the Queen's name. It was proved distinctly that the duel was fought with Captain Harvey Tuckett, and it was proved by other evidence that the Christian name of Capt. Tuckett of the 11th Light Dragoons was Harvey Garnett Phipps, but it was not proved by any witness who identified Capt. Harvey Tuckett as the person who was a party to the duel, that the names *Garnett Phipps* belonged to him.

The Attorney General having thus presented the case on the part of the prosecution, the counsel for the prisoner submitted to the court that there was no case for him to answer, there being no proof that the duel was fought with the person named in the indictment, and the court

being of his opinion, they unanimously declared the prisoner "not guilty." The prisoner was accordingly discharged, and the court was dissolved. Such a conclusion of the trial served to throw a degree of ridicule upon the proceeding, at the expense of the law officers, under whose charge it was brought forward.

BERLIN, Feb. 19. It seems to be now determined that Gen. Von Boyen, who, though seventy years of age, is very vigorous and active, will undertake the war department. General Rauch will resume the post he before held of inspector of all the Prussian fortresses, to which the state of his health is quite equal, whereas the duties of the war department are beyond his strength. His much respected successor has certainly powers of body and mind which will enable him to fill for some years this important and honorable, but very laborious office. Our finances appear to be in a most flourishing condition according to the last accounts, which are made up every three years. There is an excess of ten or twelve millions of dollars above the amount of 1838. This may be considered as the best proof of the progress of manufactures in Prussia, during the last three years, and of the increase of our commerce, which the government endeavors by all means to encourage. The benefits and advantages of the Customs Union, which many persons at first doubted, become more and more manifest.

Feb. 21. A dreadful calamity befell an American ship, the Governor Fenner, but a few hours after she sailed from Liverpool for New York. By a collision with a steamer from Dublin, she was so much injured that she sunk immediately, with every soul on board, except the captain and first mate, to the number of 122. The ship sailed from Liverpool on Friday the 20th, with a crew of eighteen, including the captain, and 106 passengers. About two o'clock on the morning of Saturday, but twelve hours after her departure from Liverpool, the vessel being then about twenty miles north of Holyhead, came in contact with the Nottingham steamer, from Dublin, and so fearful was the collision, so sudden its effects, that in less than a minute after, so says the captain, the ill-fated emigrant ship disappeared, carrying down with her every soul on board, except the two individuals above named. The night was excessively dark, so dark that, although the captain of the Gov. Fenner was enabled to see the lights of the steamer, the steersman of the lat-

ter was not able to distinguish those of the Governor Fenner. The captain was on deck at the time, and seeing the steamer on his weather bow, put his helm aport, the wind at the time blowing fresh SSW., with a heavy head sea. The steersman of the Nottingham, from the cause assigned, kept his helm starboard, which produced the melancholy calamity. The vessel struck the steamer amidships, abaft the wheel, carried away her funnel, and wheel-house, knocked her bulwarks to pieces, and so completely shattered her machinery, that she was immediately crippled and rendered useless; but no lives were lost on board. What follows will be best described in the words of the captain of the ill-fated Governor Fenner.

"I repaired forward and found the ship going down, head first. I instantly ordered the men on deck to save their lives, but they still kept going abaft. I remained on the forecastle until the ship was at the water's edge, and just saved my life by catching at a rope from the steamer. My mate jumped from the fore yard on board the steamer, and saved his life by so doing. The ship disappeared almost instantaneously. The steamer lowered a boat, but she was swamped alongside.

All the passengers were in their berths and asleep, at the moment they were thus hurried into eternity; and the crew also, with the exception of the watch. The bulk of the passengers were described as being superior to the ordinary run of steerage emigrants, for there were no cabin passengers, and some of them are said to have carried out considerable property.

With respect to the vessel, it appears by the register that she was built in Massachusetts in 1827, and had been consequently near fourteen years afloat. The captain describes her, however, as being a strong and well built craft; and, he says, that last summer \$8,000 were expended on her in iron knees and other substantial repairs.

The Nottingham, from the damage she received in the collision, was unable to make head, and from the time of the calamity until 4 o'clock in the afternoon, by constantly plying the pumps, she was kept from sinking, when a steamer from Drogheda hove in sight, took her in tow, and she arrived at Liverpool the next day. She had on board a large quantity of cattle; and to keep her afloat, 200 head were obliged to be thrown into the sea. Had the weather been at all boisterous,

the steamer would unquestionably have shared the fate of the Governor Fenner.

PARIS, Feb. 26. At 20 minutes past two, the water spouted up from the Artesian well, which has been boring for a long time past at the *Abattoir de Grenelle*; this water was tepid, which it was very natural to suppose would be the case, on account of the temperature of the deep layers which have been reached. The depth of the well is 560 metres—1,837 feet. This result, which has cost more than 160,000 francs, is the fruit of a persevering work of several years, and solves a geological problem of the greatest importance, that of the existence of water under the immense banks of green chalk of the basin of Paris. The temperature of the well was 86, Fahrenheit.

On the following day it was observed that the volume of water produced by the Artesian well of Grenelle, had rather increased than diminished since yesterday. The water is greenish, without either taste or smell; it dissolves soap, and preserves a temperature of between twenty-eight and thirty degrees (80 to 86 Fahrenheit) when it reaches the level of the soil. M. Mulot, who directed the works, was of opinion that it would be quite limpid in a few days. No preparations having been yet made to give a destination to those waters which came out in a torrent, they were turned into a sewer. Mr. Mulot, the engineer, was complimented by the appointment of a Knight of the Legion of Honor.

A NEWLY INVENTED MACHINE FOR WEAVING.—A machine, invented by a gentleman of Manchester, in England, has been introduced into use, and is added to the mechanical department of the Salford Mechanic's Institution. It is called a Jacquard apparatus, and it is thus described by the Manchester Guardian.

"When appended to looms moved by power, (as in the present instance) or otherwise, it is capable of producing either on light or heavy fabrics not only a greater variety, but also a wider and more extensive range of pattern than any other kind of loom; it makes a top and bottom shed of any required depth, without the aid of weights and springs being attached to the healds. The design is formed, and may be varied at any moment by the application of paper cards, or wooden logs and pegs. It will weave with any number of shafts, from 2 to 30; and any length of pattern, up to 5,000 picks, may be produced by it. The invention is a very important one to manufacturers."

By an act of the Legislature of the Island of Jamaica, which has received the assent of the Queen in Council, the currency of the Island is altered, so as to correspond with the sterling money of Great Britain, and henceforth, accounts will be kept, and quotations of prices will be made in sterling money. Contracts now subsisting are to be regarded and settled at the rate of £166 13s. 4d. currency for £100 sterling. The doubloon is declared a legal tender at £3 4s., and the silver dollar at 4s. 2d; and the subdivisions of those coins at the same rates. The pound is thus valued at \$4 80, and the doubloon at \$15 36. The gold and silver coins of Great Britain are declared a legal tender at the rates at which they pass current in Great Britain and Ireland.

BRITISH CENSUS OF 1841.—Mr. Thomas Henry Lister, the Hon. Edmund Phipps, and Mr. Thomas Vardon are the commissioners for taking account of the population of Great Britain in July next, pursuant to the act of 3 and 4 Victoria, c. 99. The first-named gentleman, in his capacity of Registrar-general, is specially constituted a commissioner by the terms of the act; the others have been subsequently associated with him by Her Majesty under a power thereby given for the purpose. The appointment of secretary to the commissioners has been conferred by Lord Normanby upon Mr. Mann, of the General Register-office, where the business of the census will, it is understood, be conducted.

DOMESTIC.

Jan. 26. A trembling of the earth was felt, and a rumbling sound heard in New York city, and the neighboring parts of N. Jersey, through a circuit of several miles, which was supposed to be the result of an earthquake.

Jan. 26. The boiler of a steam engine, in a sash and blind factory in Middletown, Ct., exploded, killing one man and severely injuring several others. The upper part of the boiler was thrown through the building, a height of 150 feet into the air.

Jan. 27. Alexander Mc Leod, of Upper Canada, under arrest on a charge of being engaged in the burning of the Caroline steamboat, at fort Schlosser, during the military occupation of Navy Island in 1837, was admitted to bail in the amount of \$5,000. When this fact was made generally known, the indignation of the people of Lockport was so much

excited, that they assembled in great numbers and prevailed on the bondsmen to withdraw the bail they had given, so that Mr. Mc Leod was continued in confinement to await his trial.

Jan. 29. The boiler of the steam engine attached to an India Rubber factory in Providence burst, and caused great destruction of property and the loss of the life of one of the girls engaged in the works. Several other persons were wounded severely. The boiler weighed 4,500 pounds; it was thrown over a building opposite, and lodged upon a hill at the distance of 300 feet.

PHILADELPHIA, Feb. 5. It was this morning announced, that the Bank of the United States had resolved again to suspend specie payments, having continued to meet its engagements in specie from the date of the general resumption of the banks of the city, on the 15th of January, a period of 20 days. This communication was given in the following form.

"February 4th, 1841.

"At a special meeting of the Board of Directors of the Bank of the United States, held at the Banking House, the following preamble and resolutions were unanimously adopted:

"Whereas, the Bank of the United States, in compliance with its pledge to the public, has made a fair and bona fide effort to resume and maintain specie payments, having, since the fifteenth of January last, paid out an amount, little, if at all, short of six millions of dollars in coin or specie funds, and whereas the effort to maintain specie payments by this Bank has been rendered abortive by the intentional accumulation and extraordinary enforcement of its instant liabilities:—therefore

"Resolved, That this Bank is under the necessity, for the present, of suspending specie payments.

"Resolved, That every exertion will be made by the Directors, to collect the debts, and convert into cash the assets of the Bank, for the purpose of resuming payments in specie at the earliest practicable moment.

"Resolved, That the foregoing preamble and resolutions be published.

"Extract from the minutes.

A. LARDNER, Cashier.

At the same time the other banks of the city and county announced their determination not to suspend, in the following form:

"At a meeting of delegates from the Banks of the city and county of Philadelphia, held Feb. 4th, 1841, convened upon official notice of the suspension of specie payments by the U States Bank, present delegates from the following Banks:—Pennsylvania, Girard, Philadelphia, North America, Farmers' and Mechanics', Commercial, Mechanics', Western, Penn Township, Southwark, Kensington, Manufacturers' and Mechanics', Moyamensing and Northern Liberties—

"John White, Esq., was called to the chair, and F. A. Raybold, appointed Secretary.

"The following resolution was unanimously adopted:

"Resolved, That the Banks represented in this meeting will continue the payment of specie for all their liabilities.

JOHN WHITE, Chairman.

F. A. RAYBOLD, Secretary."

This annunciation of the intention of the banks did not inspire in the public a confidence that they would in fact continue to pay specie, and there was a general disposition to take advantage of their present readiness. The Bank of the United States continued for a short time to redeem its five dollar notes, and the bank was beset by immense crowds from an early hour. Crowds of people also resorted to the other banks, mostly for the demand of small sums, yet the amount in the aggregate was considerable, and in many instances, deposits were withdrawn. Before the close of the day, all the banks, except two or three, came to the resolution of declining the payment of large sums, and they finally limited their payments to notes of five dollars. The event, as might be expected, produced a great degree of excitement, and became the chief topic of conversation and interest. The example of suspension was followed by the banks of Wilmington, Delaware, as soon as the news reached there. Some of the Philadelphia banks continued to redeem some part of their notes in specie for a few days, but not their deposits, and soon the practice relapsed into a general suspension of specie payments. The banks of Baltimore adopted the same course. The banks of New York and the New England States continued to pay in specie, and their credit was not affected by the renewed suspension in Philadelphia.

WASHINGTON, Feb. 10. COUNTING OF VOTES, AND DECLARATION OF THE CHOICE OF PRESIDENT.—At 12 o'clock this day,

in compliance with the provision of the Constitution, that the certificates of votes from the electors shall be opened by the President of the Senate in presence of the Senate and House of Representatives, and shall then be counted; in compliance with a provision of the Act of Congress of March 1, 1792, that the certificates shall be opened, the votes counted, the persons elected President and Vice President ascertained and declared, on the second Wednesday in February after each choice of Electors; and in compliance with the late resolutions of the two Houses appointing tellers to count the votes, viz. Mr. Preston of the Senate, and Messrs. Cushing and Jones of the House, the Senate proceeded to the Hall of the House for the discharge of these duties. The Senate came into the Hall preceded by the Sergeant-at-Arms, who was followed by the Vice-President, as President of the Senate, the Secretary and principal Clerk of the Senate bearing the certificates of votes, and the Senators two and two. The procession was met at the south door of the Rotunda, by the Sergeant-at-Arms of the House, and conducted down the broad aisle, and the Vice President was met by the Speaker, and conducted to his seat. The packets containing the certificates were opened, their contents declared and recorded, with the usual formalities. The result corresponded in all respects with the statements of the election which had been previously published, and with that given in this journal, [Vol. I., p. 531] The aggregates of votes for the respective candidates were as follows:

For President.

William Henry Harrison, of Ohio,	234
Martin Van Buren, of New York,	60
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For Vice President.

John Tyler, of Virginia,	234
Richard M. Johnson, of Kentucky,	48
Littleton W. Tazewell, of Virginia,	11
James K. Polk, of Tennessee,	1
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This result was declared by the Vice President, and the Senate withdrew. A joint committee was then appointed to wait on William Henry Harrison, and notify him that he has been duly elected President of the United States for four years, commencing on the 4th of March next. This committee consisted of

Messrs. Preston of the Senate, and Cushing and Jones of the House.

In the Senate it was resolved that the President of the Senate cause John Tyler of Virginia to be notified that he has been duly elected Vice President of the United States for four years, commencing on the 4th of March next.

PHILADELPHIA, Feb. 16. The President and Directors of the Bank of the United States, have addressed a memorial to the Legislature of Pennsylvania, praying that the relief granted by the resumption resolutions may be continued to that bank, in common with the other banks of the State, and that a distinction which some have proposed, may not be made to the disadvantage of that bank. The memorial presents a recital of the efforts which have been made by the bank to comply with the resolutions requiring payment in specie, which they did from January 15 to February 4. During that period the Bank had paid out upwards of six millions of dollars in specie, or funds equivalent to specie.

The bank has paid to the State, in the form of a bonus for its charter, the sum of \$3,022,662. It has besides subscribed \$415,000 to Rail Road, Navigation and Turnpike Companies, as required by its charter, and has paid by voluntary subscription, \$978,759 to promote public works of a like nature. It has loaned to the State at different times since November, 1836, the sum of \$8,670,000, of which \$3,300,000 have been loaned since January 23, 1840. It has thus applied upwards of \$12,000,000 of its capital directly to the purposes of the State, and nearly a million more to works of public concern. More than \$7,500,000 of this sum have been loaned to the State within the last two years, a period of unexampled difficulty in the negotiating of money. These contributions are represented as constituting a reason why the bank should not be denied the common relief that is now solicited at the hands of the Legislature, for all other banks.

The memorial represents further, that if the relief prayed for is refused, it will cause a great sacrifice of public and private interests. The Directors do not ask to be relieved from the payment of their debts, but to be exempted from penalties imposed by the Legislature, which if inflicted, will inevitably retard the payment of their debts, and will produce a wasteful sacrifice of capital. In regard to the payment of their debts, they say,

"The sufficiency of the assets of the

bank to meet all her engagements to creditors is in the opinion of your memorialists as much a matter of moral certainty, as that the assets of any bank in this State or elsewhere, are sufficient for a like purpose. If, through measures of folly or madness, all personal securities shall be annihilated, and real estate be made dead in the hands of those who own it, the calamity will not be confined in its effects to the Bank of the United States; and unless they are so annihilated, the sufficiency of the Bank assets is morally certain."

The memorialists represent that the stockholders have done nothing that should subject them to the public resentment. If there have been error and mismanagement in the bank, it has not been theirs.

Boston, Feb. 22. This morning, died in the 81st year of his age, the Hon. Thomas L. Winthrop, a gentleman most highly esteemed during his long life. He has served the public in a number of important trusts, and among others in the office of Lieut. Governor, to which he was elected for a number of successive years. In that office he was a faithful and efficient member of the Executive Council.

The steam ship *Britannia* arrived at Boston after a passage of 17½ days from Liverpool, bringing London news to Feb. 4. She brought the news of the opening of Parliament, by a speech from the Queen in person, Jan. 26, and of a definitive arrangement for the settlement of affairs in Turkey and Egypt. The Ottoman government had agreed to offer to Mehemet Ali the reinvestiture of the government of Egypt, with the right of hereditary succession, and the latter had agreed to restore the Turkish fleet, and to withdraw his troops from Syria. The President's Message was received in London, Jan. 12. There was no later news from China.

Boston, Feb. 23. In the Massachusetts Legislature, the Hon. Daniel Webster having resigned his seat in the Senate of the United States, which he had held under successive appointments for a period of fourteen years, the Hon. Rufus Choate, of Boston, was elected in his place. The votes in the House of Representatives were for Mr. Choate 244, Nathan Willis 93, John Q. Adams 7, and 5 scattering. In the Senate, for Mr. Choate 32, scattering 4. The term for which this election is made continues to March, 1845.